http://www.humanityspace.net
http://www.гуманитарноепространство.рф

ISSN 2226-0773

2025

Volume 14, No 1 Том 14, № 1

ISSN 2226-0773

HUMANITY SPACE
INTERNATIONAL ALMANAC

ГУМАНИТАРНОЕ ПРОСТРАНСТВО
МЕЖДУНАРОДНЫЙ АЛЬМАНАХ

Volume 14, No 1
Том 14, № 1

ISSN 2226-0773

HUMANITY SPACE
INTERNATIONAL ALMANAC

ГУМАНИТАРНОЕ ПРОСТРАНСТВО
МЕЖДУНАРОДНЫЙ АЛЬМАНАХ

Volume 14, No 1
Том 14, № 1

БИОЛОГИЧЕСКИЕ НАУКИ / BIOLOGICAL SCIENCES

2025

Гуманитарное пространство. ***Международный альманах*** **ТОМ 14, № 1, 2025**
Humanity space. ***International almanac*** **VOLUME 14, No 1, 2025**

Главный редактор / Chief Editor: **М.А. Лазарев / M.A. Lazarev**
Дизайн обложки / Cover Design: **М.А. Лазарев / M.A. Lazarev**
E-mail: **humanityspace@gmail.com**

Научные редакторы / Scientific Editors: **В.П. Подвойский / V.P. Podvoysky**
E-mail: **9036167488@mail.ru**
О.В. Стукалова / O.V. Stukalova
E-mail: **stukalova@obrazfund.ru**

Веб-сайт / Website: **http://www.humanityspace.net**
http://www.гуманитарноепространство.рф

Издательство / Publishers:
Международная академия образования / International Academy of Education
121433, Россия, г. Москва, ул. Большая Филёвская, 28, корп. 2
Bolshaya Filevskaya str., 28, building 2, Moscow 121433 Russia

Напечатано / Printed by:
ООО «АЕГ Груп» / A.E.G. Group
125009, г. Москва, Тверская улица, 27, строение 1, подъезд 2
Tverskaya str., 27, building 1, approach 2, Moscow 125009 Russia
Постер-МГУ / Poster-MSU
119296, г. Москва, ул. Молодежная, 3
Molodezhnaya, 3, Moscow 119296 Russia

Дата выпуска / Date of issue: **24.03.2025**
Реестр / Register: **ISSN 2226-0773**
DOI: 10.5281/zenodo.15087423
EDN: CHGDTD

Фото на обложке / Cover photo: *Agapanthia* (*Epoptes*) *dahlii muellneri* Reitter, 1898: Uzbekistan, Kuramin Range, Kamchik Pass, 1500 m, 25.6.1991, *Alcea nudiflora* (Lindl.) Boiss. Photo by Mikhail Danilevsky.

Agapanthia (*Epoptes*) *dahlii muellneri* Reitter, 1898: Узбекистан, Курамский хребет, перевал Камчик, 1500 м, 25.6.1991, Шток-роза голоцветковая. Фото: Михаил Данилевский.

РЕДАКЦИОННАЯ КОЛЛЕГИЯ

Поль Дмитрий Владимирович
доктор филологических наук, профессор
Московский педагогический государственный университет

Полюдова Елена Николаевна (США: Калифорния)
кандидат педагогических наук
Окружная библиотека Санта Клара

Сёке Каталин (Венгрия)
кандидат филологических наук, доцент
Института Славистики Сегедского университета

Стукалова Ольга Вадимовна
доктор педагогических наук, доцент
Благотворительный фонд «Образ жизни»
Институт психологии Российской академии образования

Солодухин Владимир Иосифович
доктор педагогических наук, профессор
Санкт-Петербургский гуманитарный университет профсоюзов

Солодухина Татьяна Константиновна
доктор педагогических наук, профессор
Санкт-Петербургский гуманитарный университет профсоюзов

Табачникова Ольга Марковна (Великобритания: Престон)
доктор философских наук, кандидат физико-математических наук, доцент
Университет Центрального Ланкашира

Щербакова Анна Иосифовна
доктор педагогических наук, доктор культорологии, профессор
Московский государственный институт имени А.Г. Шнитке

EDITORIAL BOARD

Humanity space *International almanac* VOL. 14, No 1, 2025: 9-14
Гуманитарное пространство *Международный альманах* ТОМ 14, № 1, 2025: 9-14
http://zoobank.org/urn:lsid:zoobank.org:pub:EA075897-402A-4ACD-919D-62867A6C899D
DOI: 10.24412/2226-0773-2025-14-1-9-14
EDN: IZBHBL

A new subspecies of *Psilotarsus brachypterus* (Gebler, 1830) (Coleoptera, Cerambycidae) from South-East Kazakhstan

M.L. Danilevsky

A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences
Leninsky prospect, 33, Moscow 119071 Russia
e-mail: danilevsky@cerambycidae.net
ORCID 0000-0001-8079-3343

Key words: Coleoptera, Cerambycidae, Prioninae, Prionini, taxonomy, new subspecies, Kazakhstan.
Abstract. *Psilotarsus brachypterus alakolensis* **ssp. nov**. is described from South-East Kazakhstan (Almaty reg., 30 km N of Zhanama, 46°27'N, 80°39'E, 18.6.2024). 133 males were collected at light by 3 persons: K. Hodek, M. Holomčík, F. Klabusay. The new subspecies is very close to the nominative one but differs by several small features. The distinguishing characters are discussed and illustrated.

Introduction

Psilotarsus brachypterus (Gebler, 1830) is accepted now with 5 subspecies distributed from East to West Kazakhstan, in Central Asia (Uzbekistan), China (Xinjiang) and in the Asian parts of Orenburg Region (West Siberia, Russia).

The original description was based on 2 females: “alterum ad fl. Irtysch, alterum in deserto Kirghisico”. Types are not known, but 5 specimens (4 males and 1 female) from Irtysh valley (Slavyanka environs) are available in author’s collection.

The nominative subspecies *P. b. brachypterus* (Gebler, 1830) is distributed from Russian South-West Siberia (south of Orenburg Region) through East Kazakhstan to the south of East Kazakhstan Region (Zaisan Depression). The taxon is also known from China (Xinjiang). A population from near Zaisan Lake only is now available for study by the author. Other populations could represent another subspecies not described yet.

P. b. hemipterus (Motschulsky, 1845) - according to Danilevsky (2000), the taxon was described from Tersakan river valley, not far from the source of Turgai river (Arkalyk env.).

It is distributed in north-west, north and partly central Kazakhstan: from Orenburg district of Russia southwards to Sary-Su river and low Syr-Darja river in Kazakhstan and further south to Samarkand region in Uzbekistan; and from Ural-river valley, through Aktiube region, south of Kustanai region (Arkalyk environs) to about Akmola and Karaganda regions.

P. b. aralensis Danilevsky, 2000 was described from Ustiurt plateau - West Kazakhstan and West Karakalpakia in West Uzbekistan, between Caspian and Aral seas.

P. b. pubiventris (Semenov, 1900) was described from near "Vernyj" (now Almaty in Kazakhstan). It is distributed in Kazakhstan along planes and foothills from Chu-Ili mountains in the West to about Chilik and Dzungarsky Alatau eastwards; and from Balkhash lake in the North to about north slope of Zailiysky Alatau.

P. b. alpherakii (Semenov, 1900) was described from China (Yining environs). It is distributed in China Dzhungarie between Kuldzha (now Yining) and Kazakhstan border, so most probably the taxon occurs also in Kazakhstan in the environs of Dzharkent.

The occurrence of the species in Alakol Lake depression was known from long ago. Danilevsky (2000: 50) recorded the dry debris from the area, which were preliminary identified as *P. b. pubiventris*. Recently a huge series of males was collected there by Czech entomologists. New material is described below as a new subspecies.

Results

Psilotarsus brachypterus alakolensis ssp. nov.

Figs 1-2, 4, 6, 8, 10

Description. Body (including antennae, elytra and legs) dark-brown (Figs 1-2), nearly black; head relatively small; eyes big, the distance between dorsal eye lobes a little less than width of 1st antennal joint; last joint of maxillary palpi considerably attenuated; antennae long, reaching last elytral 7th, strongly serrated, slightly lightened apically; middle antennal joints flat, triangular, acute (Fig. 6); 1st antennal joint very short, nearly globose (Fig. 6); prothorax (Fig. 8) strongly

transverse, about 1,9 times wider than long, with very fine scattered short pubescence, often glabrous at middle, often densely pubescent laterally; lateral thoracic spines short, posterior lateral thoracic spines often totally obliterated; pronotal punctation moderately rough; elytra moderately narrowed posteriorly, about 1.6 times longer than basal width, rounded apically or with hardly distinct sutural angle; tarsal pads strongly reduced, sometimes indistinct; metathorax with dense, long pubescence, which is shorter and sparser along episternum; abdomen strongly shining, with scattered short pubescence; last abdominal tergite rounded, with very small emargination; last abdominal sternite shallowly emarginated; male genitals - see Fig. 10; body length: 19-31.5 mm.

Differential diagnosis. *P. b. alakolensis* **ssp. nov**. is close to the nominative subspecies (Fig. 3, 7, 9), but *P. b. brachypterus* (Gebler, 1830), is distributed eastwards and differs by many characters: eyes smaller, the distance between dorsal eye lobes longer than width of 1st antennal joint; antennae reddish; 1st antennal joint elongated, distinctly longer than wide (Figs. 6-7); prothorax (Figs. 8-9) less wide, with about 1.8 times wider than long; posterior pronotal angles small, but distinct; pronotal punctations rougher; tarsal pads wider; metathorax pubescence shorter and sparser, episterna pubescence much sparser.

Type material. Holotype (Fig. 1), male, Kazakhstan, Almaty region, 30 km N of Zhanama, 46°27'56.26"S, 80°39'31.77"W, 18.6.2024, K. Hodek leg. (author's collection); paratypes: 5 males with the same label (author's collection); 53 males, with the same label (collection of K. Hodek, Brno - Štýřice); 35 males, same data, M. Holomčík leg. (collection of M. Holomčík, Lusatia); 45 males, same data, F. Klabusay leg. (collection of F. Klabusay, Brno).

Material used for comparison. 2 males (32 mm & 23 mm), E Kazakhstan, north bank of Zaisan Lake near Slavianka, 420 m, 24.6.1997, V. Lukhtanov leg. (author's collection); 1 male, E Kazakhstan, Monrak Ridge, Priozernyi env., 900 m, 20.6.1997, V. Lukhtanov leg. (author's collection); 1 male, E Kazakhstan, Saur Ridge, Kenderlik river, 900 m, 5.7.1997, V. Lukhtanov leg. (author's collection).

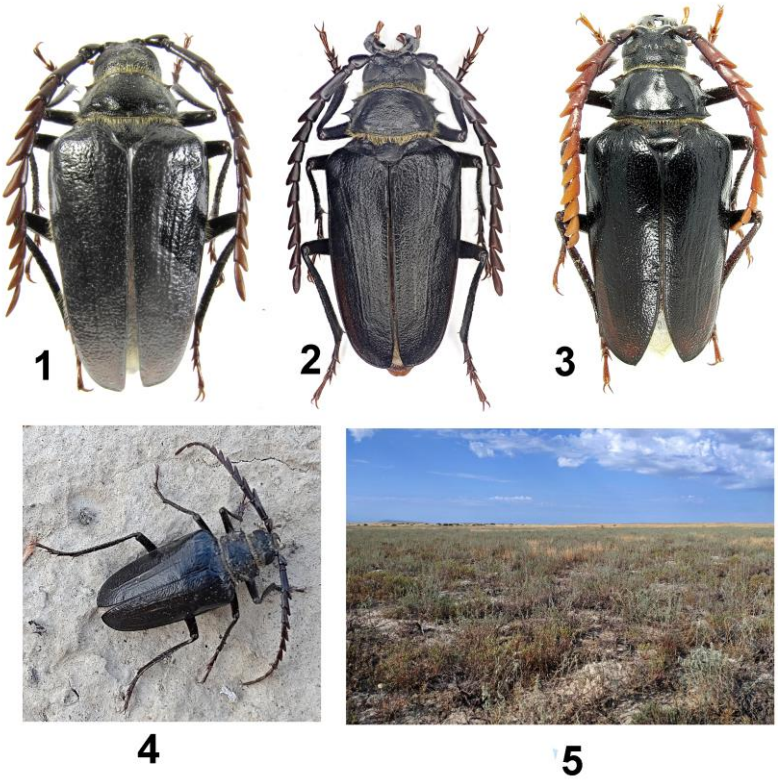
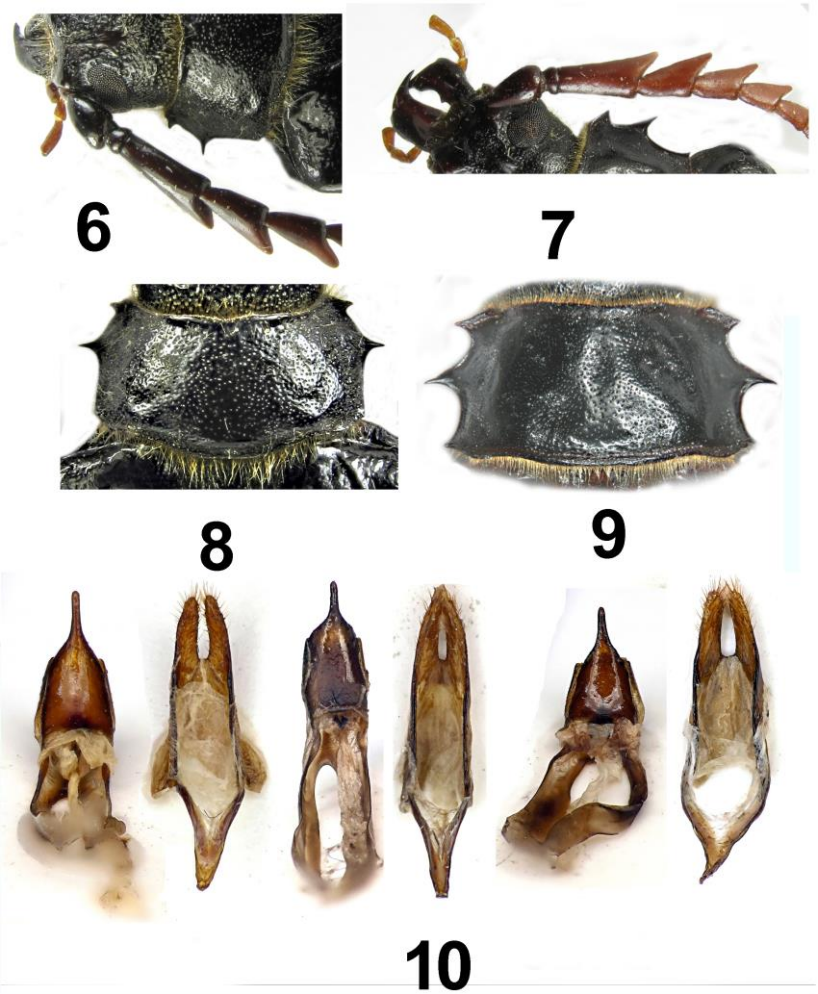


Fig. 1. Holotype of *Psilotarsus brachypterus alakolensis* **ssp. nov.**
Fig. 2. Paratype of *P. b. alakolensis* **ssp. nov.** Photo by K. Hodek.
Fig. 3. Male of *P. b. brachypterus* (Gebler, 1830), Kazakhstan, northern shore of Zaisan Lake, Slavianka, 24.6.1997, V. Lukhtanov leg.
Fig. 4. *P. b. alakolensis* **ssp. nov.** in nature**.** Photo by K. Hodek.
Fig. 5. Landscape of the type locality of *P. b. alakolensis* **ssp. nov.** Photo by K. Hodek.



Figs. 6-7. Head and basal antennal joints: 6 - *P. b. alakolensis* **ssp. nov.**; 7 - *P. b. brachypterus.*
Figs. 8-9. Pronotum: 8 - *P. b. alakolensis* **ssp. nov.**; 9 - *P. b. brachypterus.*
Fig. 10. Median lobes of aedeagus and parameres of *P. b. alakolensis* **ssp. nov.** Photo by K. Hodek.

Bionomy. K. Hodek wrote to me: “All specimens were caught on a light trap only, roughly from dusk at 8:15 p.m. (23°C) to 11:00 p.m. (20°C), when it cooled down. Only males were caught, all and only when they arrived at the light trap. At the same time, a search of the steppe (Fig. 5) in the wider area was also carried out with a flashlight, no (!) specimen was found outside the light trap - neither males nor females. It was probably the beginning of swarming, all specimens found are in excellent condition and without damage.”
Etymology. The new taxon is named after the region where it is found.

Acknowledgements. I am very grateful to my Czech colleagues K. Hodek (Brno - Štýřice, Czech Republic), M. Holomčík (Lusatia, Czech Republic) & F. Klabusay (Brno, Czech Republic) for supplying me with specimens for study.

REFERENCES

Danilevsky M.L. 2000. Review of genus Psilotarsus Motschulsky, 1860, stat. rest. (Coleoptera, Cerambycidae, Prioninae). - Les Cahiers Magellanes. 3: 1-34.

Gebler F.A. von. 1830. Bemerkungen über die Insecten Sibiriens, vorzüglich des Altai. (Part III). Pp. 1-228. - In: C.F. Ledebour (ed.): Reise durch das Altai-Gebirge und die soongorische Kirgisen-Steppe. Auf Kosten der Kaiserlichen Universität Dorpat unternommen im Jahre 1826 in Begleitung der Herren D. Carl Anton Meyer und D. Alexander von Bunge R. K. Collegien-Assessors. Zweiter Theil. Berlin: G. Reimer, iv + 522 + [2] pp.

Motschulsky V. de 1845. Remarques sur la collection de coléoptères russes de M. [Motschoulsky]. Article I.- Bulletin de la Société Impériale des Naturalistes de Moscou, 18 (1): 1-127, pls 5-7. [Corrections in 18 (2) Additum, post p. 549 (unnumbered)].

Received: 30.12.2024
Accepted: 10.03.2025

Humanity space *International almanac* VOL. 14, No 1, 2025: 15-20
Гуманитарное пространство *Международный альманах* ТОМ 14, № 1, 2025: 15-20
http://zoobank.org/urn:lsid:zoobank.org:pub:E3617FCA-BD45-4499-AF26-9AEBE0F1791E
DOI: 10.24412/2226-0773-2025-14-1-15-20
EDN: MBUMYO

Two new *Agapanthia* Audinet-Serville, 1835 (Coleoptera, Cerambycidae) from Kazakhstan

M.L. Danilevsky[1], K. Hodek[2]

[1]A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences
Leninsky prospect, 33, Moscow 119071 Russia
e-mail: danilevsky@cerambycidae.net
ORCID 0000-0001-8079-3343

[2]Havlenova 29, Brno - Štýřice 63900 Czech Republic
e-mail: hkarlos@seznam.cz

Key words: Coleoptera, Cerambycidae, *Agapanthia*, new species, Kazakhstan.
Abstract. Two similar new species are described from East Kazakhstan *Agapanthia* (*Epoptes*) *kucherai* **sp. n.** (Lepsy environs) and *A.* (*E.*) *klabusayi* **sp. n.** (Shubarkayin environs). Color photos of specimens and photos of localities are proposed.

Introduction

Two new species described below belong to the same species-group of the subgenus *Epoptes* Gistel, 1857, as 2 species described by me from Kazakhstan recently (Danilevsky, 2024): *Agapanthia plewai* Danilevsky, 2024 and *A. badenkoi* Danilevsky, 2024, because both with red basal parts of 3rd-12th antennal joints and without setae tufts of 3rd antennal joints; but both have yellow elytra with dense elytral cover, partially hiding punctation, while elytra of two following new species look very dark, nearly black.

Acronyms of collections:

MD - collection of M.L. Danilevsky (Moscow, Russia)
MH - collection of M. Holomčík (Lužice, Czech Republic)
FK - collection of F. Klabusay (Brno, Czech Republic)
KH - collection of K. Hodek (Brno, Czech Republic)
PK - collection of P. Kučera (Liberec, Czech Republic)

Results

Agapanthia kucherai sp. n.

Figs. 1-7

Description. Body small and narrow; frons elongated, shining, with several scattered small dots and very fine microsculpture, with pale recumbent pubescence concentrated near eyes, with several erect setae; genae a little shorter than lower eye lobes; vertex with a row of dense seta and hardly distinct small punctation; antennae thin, surpassing elytral apex in males with 5 joints, in females - with 3-4 joints; 3rd-12th joints red with black apices; antennal setae tufts are absent; apex of 3rd antennal joint with several single long setae (Fig. 3), which can be more or less denser (Fig. 4); apex of 4th antennal joint with not more than 3-5 long setae (Figs. 3-4); male prothorax about as wide posteriorly as long, in females prothorax basally a little wider than long; pronotum with dense central and lateral yellow stripes, without recumbent pubescence in between; pronotal punctation sparser in some places; elytra grey-black with poor luster; curved elytral margin with dense yellow pubescence; elytral setae patches hardly visible, nearly indistinct; grey lateral elytral stripe is absent; erect elytral setae short, strongly oblique, male elytra about 2.9 times longer than wide, female elytra - about 3.1-3.2 times; ventral body side with dense yellow pubescence; body length in males: 12.2-18 mm, body length in females: 12-18.1 mm.

Differencial diagnosis. The new species is very close to *A. klabusayi* **sp. n**. described below, but differs by shorter and sparser frontal pubescence; shorter antennae, surpassing elytra with 5 (males) or 3-4 (females) joints; apical setae of 3rd antennal joints from single to less numerous; prothorax subquadrate (not transverse); pronotal punctation sparser in some places; elytral punctation finer and sparser, never conjugated; erect elytral setae shorter, less numerous, strongly oblique.

Material. Holotype, male, E Kazakhstan, Lepsy environs, 46°13'N, 78°58'E, 400 m, 2.6.2016, K. Hodek leg. - MD; 60 paratypes: 3 males, 2 females with the same label - MD; 32 males, 20 females with the same label - KH; 2 males, 1 female with the same data, P. Kučera leg. - PK.

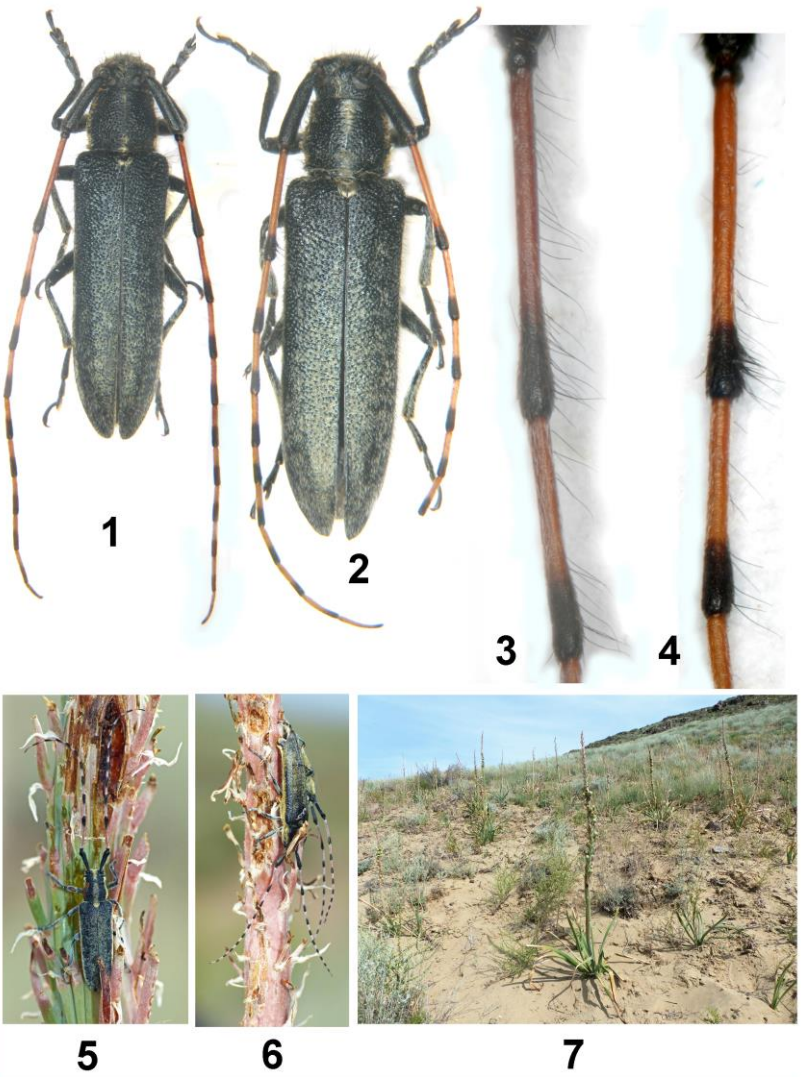


Fig. 1. Holotype of *Agapanthia kucherai* **sp. n.**
Fig. 2. Paratype, female of *A. kucherai* **sp. n.**
Figs. 3-4. 2nd-4th antennal joints of *A. kucherai* **sp. n.**: 3 - male, 4 - female.
Figs. 5-6. *A. kucherai* **sp. n.** in nature on *Eremurus inderiensis.*
Fig. 7. Landscape of the type locality of *A. kucherai* **sp. n.** with *Eremurus inderiensis.*

Biology. All specimens were observed feeding on *Eremurus inderiensis* (M. Bieb.) Regel. imagoes are active in early summer.

Etymology. The new taxon is dedicated to P. Kučera, who took part in the collecting of the type series.

Agapanthia klabusayi sp. n.

Figs 8-12

Description. Body small and narrow; frons elongated, shining, with several scattered small dots and very fine microsculpture, with very dense pale recumbent pubescence concentrated near eyes, with numerous erect setae; genae a little shorter than lower eye lobes; vertex with very distinct bigger punctation, micro-rugose, with a row of dense setae; antennae thin, surpassing elytral apex with 6 joints, in females - with 3 joints; 3rd-12th joints red with black apices; antennal setae tufts are absent; apex of 3rd antennal joint with several long setae (Figs 10-11); apex of 4th antennal joint with about 10 long setae; male prothorax slightly transverse, about 1.1 times shorter than basal width; in females prothorax about 1.3 times shorter than basal width; pronotum with dense central and lateral yellow stripes, without recumbent pubescence in between; pronotal punctation very dense, partly conjugated; elytra grey-black with poor luster; curved elytral margin with dense yellow pubescence; elytral setae patches hardly visible, nearly indistinct; grey lateral elytral stripe is absent; erect elytral setae longer, more numerous, less oblique, almost perpendicular; male elytra about 3 times longer than basal width, female elytra - about 2.9 times; ventral body side with dense yellow pubescence; body length in males: 12.0-17.9 mm, body length in females: 14.0-18.0 mm.

Differencial diagnosis. The new species is very close to *A. kucherai* **sp. n**. described above, but differs by shorter and sparser frontal pubescence; shorter antennae, surpassing elytra with 5 (males) or 3-4 (females) joints; apical setae of 3rd antennal joints from single to less numerous; prothorax transverse; pronotal punctation sparse in places; elytral punctation finer and sparser, never conjugated; erect elytral setae shorter, less numerous, strongly oblique.

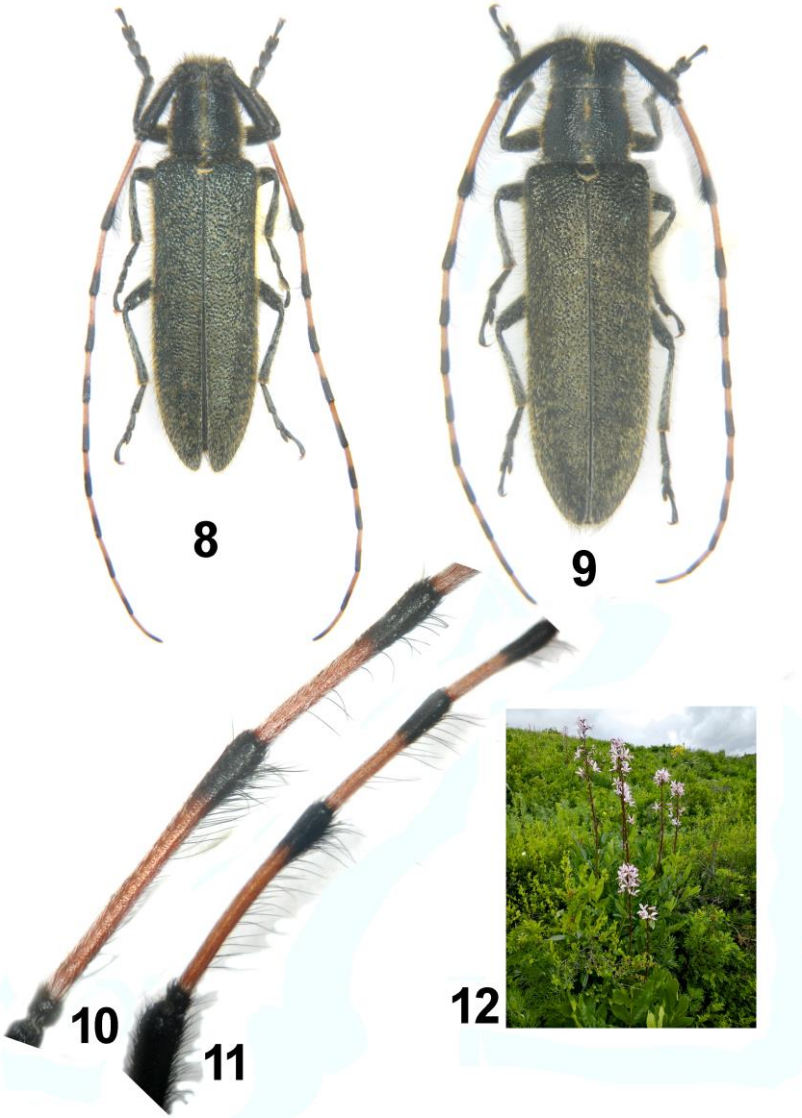


Fig. 8. Holotype of *Agapanthia klabusayi* **sp. n.**
Fig. 9. Paratype, female of *Agapanthia klabusayi* **sp. n.**
Fig. 10-11. 2nd-4th antennal joints of *A. klabusayi* **sp. n.**: 10 - male, 11 - female.
Fig. 12. Landscape of the type locality of *A. klabusayi* **sp. n.** with *Dictamus* sp.

Material. Holotype male, E Kazakhstan, 4 km E of Shubarkayin (Samarka), 49°08'42"N, 83°20'16"E, 810 m, 15.6.2024, K. Hodek leg. - MD; 74 paratypes: 1 male, 1 female with the same label - MD; 21 males, 6 females with the same label - KH; 14 males, 9 females with the same data, M.Holomčík leg. - MH; 14 males, 8 females with the same data, F. Klabusay leg. - FK.

Biology. All specimens were observed feeding on *Dictamus* sp. in the middle of June.

Etymology. The new taxon is dedicated to F. Klabusay, who took part in the collecting of the type series.

Acknowledgements. We are very grateful to P. Kučera (Liberec, Czech Republic), M. Holomčík (Lužice, Czech Republic) and F. Klabusay (Brno, Czech Republic) for supplying us with specimens for study.

REFERENCES

Danilevsky M.L. 2024. Two new species of the genus Agapanthia Audinet-Serville, 1835 (Coleoptera: Cerambycidae) from Kazakhstan. - Russian Entomological Journal. 33 (4): 300-303.

Received: 03.01.2025
Accepted: 10.03.2025

Humanity space *International almanac* VOL. 14, No 1, 2025: 21-24
Гуманитарное пространство *Международный альманах* ТОМ 14, № 1, 2025: 21-24
http://zoobank.org/urn:lsid:zoobank.org:pub:959BEBB3-D1D2-4FEA-8254-1414F96FE9C0
DOI: 10.24412/2226-0773-2025-14-1-21-24
EDN: PQLVMW

Study of the genus *Anthrenus*, subgenus *Florilinus* from the Eastern Palaearctic Region. Part 1: species from Mongolia (Coleoptera: Dermestidae: Megatominae)

J. Háva

Private Entomological Laboratory & Collection
Rýznerova 37/37, CZ-252 62 Únětice u Prahy, Prague-west, Czech Republic
e-mail: jh.dermestidae@volny.cz
ORCID 0000-0001-8076-9538

Key words: Taxonomy, new species, Coleoptera, Dermestidae, Anthrenus, Mongolia, Palaearctic Region.
Abstract. *Anthrenus* (*Florilinus*) *baganuur* **sp. nov.** from Mongolia is described, illustrated and compared with a similar species. The new species differs by the structure of antennae and male genitalia.

Introduction

The subgenus *Florilinus* Mulsant et Rey, 1868 of the genus *Anthrenus* Geoffroy, 1762 recently contains 41 species Worldwide (Háva 2023a-e, 2024). Only two species are known from Mongolia (Mroczkowski 1965, Zhantiev 1973, Háva 2006, 2024).

The subgenus is characterized by antennae consisting of 8 antennomeres. Males differ from females by the shape of the antennal club. In males, the terminal antennomere is longer than the penultimate one; in females it is as long as the penultimate one. Adults can be found on plants, but also in households, where the larvae are harmful to different commodities of natural origin. They are feared pests in museum collections (Peacock 1993, Háva 2023a-e).

Material and methods

The size of the beetles or of their body parts can be useful in species recognition and thus, the following measurements were made:

total length (TL) - linear distance from anterior margin of pronotum to apex of elytra.

elytral width (EW) - maximum linear transverse distance.

The material mentioned is deposited in following collection: (JH), Jiří Háva, Private Entomological Laboratory & Collection, Únětice u Prahy, Prague-West, Czech Republic.

Specimen of the species described here are provided with red printed labels with texts as follows: „HOLOTYPE *Anthrenus* (*Florilinus*) *baganuur* **sp. nov.** Jiří Háva det. 2025".

Result

***Anthrenus* (*Florilinus*) *baganuur* sp. nov.**

Figs. 1-3

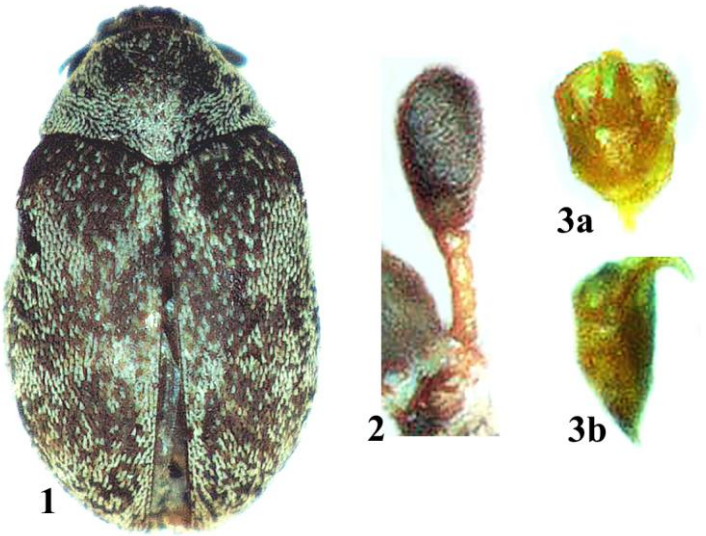
Description. Female. Body measurements (mm): TL 2.3 EW 1.4; body brown, small, oval (Fig. 1). Dorsal surfaces covered by intermixed brown and white scales. Head covered by white scales, posteriorly with brown scales. Palpomeres and labrum brown. Antennae consisting of 8 antennomeres, antennomeres brown, terminal antennomere longly oval (Fig. 2). Antennal fossa long and broad, finely punctured. Frons with median ocellus. Eyes with entire median margin. Pronotum covered with white and brown scales, brown scales forming spot discally. Scutellum small, triangular. Elytra with brown and white scales, white scales forming fasciae (Fig. 1). Epipleuron short, narrow, with white scales. Individual scales small and triangular. Ventral surface covered with white scales, abdominal ventrites covered by white scales only. Ventrites I-V without spots in the middle, covered by white scales. Prosternum with white scales only. Metasternum with white scales only, without any large patch at lateral margins. Legs brown with white scales and white setae. Aedeagus (Fig. 3).

Female. Unknown.

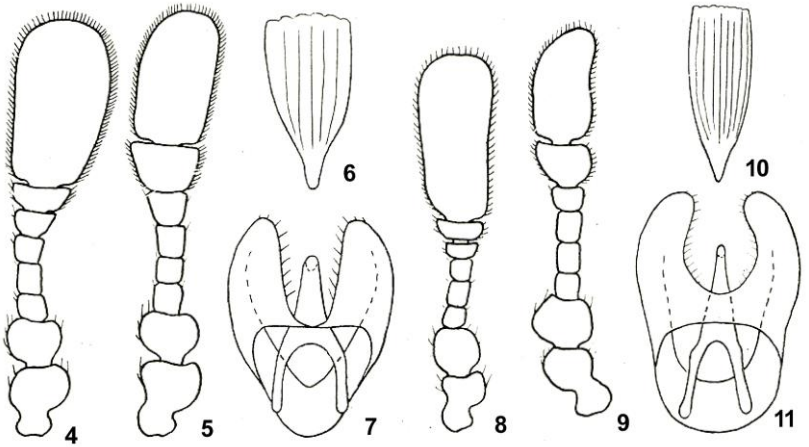
Differential diagnosis. The new species similar to the two *Florilinus* species known from Mongolia, but differs from them by the structure of antennae and male genitalia (visually according to broad body form very similar to *A. kaszabi* but differs from it by the structure of antennae and male genitalia).

Material. Holotype, male, "Mongolia, 5 km W Bagan-Nur [= Baga Nuur], 31.7.-1.8.1975" - JH.

Etymology. Toponymic, named according to Baga Nuur lake in the Zavkhan Aimag (Mongolia).



Figs. 1-3. *Anthrenus* (*Florilinus*) *baganuur* **sp. nov**.: 1- habitus, dorsal aspect; 2- antenna; 3a, 3b - male genitalia.



Figs. 4-11. *Anthrenus* (*F.*) *kaszabi* Zhantiev, 1973: 4 - antenna of male; 5- antenna of female; 6- dorsal scales; 7 - aedeagus; *Anthrenus* (*F.*) *mongolicus* Zhantiev, 1973: 8 - antenna of male; 9 - antenna of female; 10 - dorsal scales; 11 - aedeagus (according to Zhantiev (1973)).

Remarks. Mroczkowski (1965) mentioned the species *A. museorum* (Linnaeus, 1767) from Gobi Aimak, but the specimen belong to *A. kaszabi* Zhantiev, 1973.

Acknowledgements. I am very indebted to Larry G. Bezark (California, USA) for the comments and English revision to the manuscript.

REFERENCES

Háva J. 2006: Contribution to the knowledge of Dermestidae (Coleoptera) from Mongolia. - Acta Musei Reginaehradecensis S. A. 31: 83-87.

Háva J. 2023a: Study of the genus *Anthrenus*, subgenus Florilinus from the Oriental Region. Part 1. Anthrenus (Florilinus) declamator sp. nov. from Taiwan (Coleoptera: Dermestidae: Megatominae). - Munis Entomology & Zoology. 18 (1): 57-59.

Háva J. 2023b: Study of the genus Anthrenus, subgenus Florilinus from the Oriental Region. Part 2. Anthrenus (Florilinus) laosensis sp. nov. from Laos (Coleoptera: Dermestidae: Megatominae). - Natura Somogyiensis. 40: 5-8.

Háva J. 2023c: Study of the genus Anthrenus subgenus Florilinus from the Oriental Region. Part 3. A new species from Indonesia, Sumba Island (Coleoptera: Dermestidae: Megatominae). - Munis Entomology & Zooogy. 18 (2): 746-766.

Háva J. 2023d: Study of the genus Anthrenus subgenus Florilinus from the Oriental Region. Part 4. A new species from Malaysia (Coleoptera: Dermestidae: Megatominae). - Munis Entomology and Zoology. 18 (supplement): 1820-1822.

Háva J. 2023e: Study of the genus Anthrenus subgenus Florilinus from the Afrotropical Region (Coleoptera: Dermestidae: Megatominae). - Faunitaxys. 11 (46): 1-3.

Háva J. 2024. Dermestidae World (Coleoptera). - World Wide Web electronic publication (open in 2004): http://www.dermestidae.wz.cz (version 2018, update September 2024).

Mroczkowski M. 1965: Ergebnisse der Zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei. 11. Silphidae partim, Dermestidae (Coleoptera). - Folia Entomologica Hungarica. 17: 183-185.

Peacock E. R. 1993. Adults and larvae of hide, larder and carped beetles and their relatives (Coleoptera: Dermestidae) and of derodontid beetles (Coleoptera: Derodontidae). Handbooks for the Identification of British Insects. 5: 1-144.

Zhantiev R. D. 1973: Ergebnisse der Zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei. Nr. 321. Dermestidae (Coleoptera). Annales - Historico-Naturales Musei Nationalis Hungarici. 65: 187-194.

Received: 11.12.2024
Accepted: 18.03.2025

Humanity space *International almanac* VOL. 14, No 1, 2025: 25-28
Гуманитарное пространство *Международный альманах* ТОМ 14, № 1, 2025: 25-28
http://zoobank.org/urn:lsid:zoobank.org:pub:60F273D9-CDBF-4A1B-9B02-92A79FD2E6B6
DOI: 10.24412/2226-0773-2025-14-1-25-28
EDN: QHNKPG

Новая находка жука-усача *Anaesthetis flavipilis* Baeckmann, 1903 (Coleoptera, Cerambycidae) в Республике Хакасия

Д.А. Кулешов

Томский филиал ФГБУ «Всероссийский центр карантина растений»
634021, г. Томск, проспект Фрунзе, 109А
Tomsk branch of the Federal State Budgetary Institution "All-Russian Plant Quarantine Center"
Frunze prospekt, 109A, Tomsk 634021 Russia
e-mail: ceramb@mail.ru

Ключевые слова: Coleoptera, Cerambycidae, *Anaesthetis*, новая находка, Республика Хакасия.
Key words: Coleoptera, Cerambycidae, *Anaesthetis*, new find, Republic of Khakassia.
Резюме. *Anaesthetis flavipilis* Baeckmann, 1903 впервые обнаружен на территории республики Хакасия, новые данные позволяют существенно расширить ареал вида на восток.
Abstract. *Anaesthetis flavipilis* Baeckmann, 1903 was first discovered in the Republic of Khakassia; new data allow us to significantly expand the species' range to the east.
[Kuleshov D.A. New find of the longhorn beetle *Anaesthetis flavipilis* Baeckmann, 1903 (Coleoptera, Cerambycidae) in the Republic of Khakassia**]**

Введение

Во время энтомологических исследований фауны чешуекрылых, проведенных в июне 2024 года в Республике Хакасия, был обнаружен жук из рода *Anaesthetis*. До настоящего времени представители этого рода не отмечались для республики, что и вызвало большой интерес. При дальнейшем изучении экземпляра выявлена принадлежность к *Anaesthetis flavipilis* Baeckmann, 1903. Обнаружение этого вида в Хакасии существенно расширяет Западно-Сибирскую часть его ареала. Кроме того, детальное изучение этого жука, не имеет существенных отличий от экземпляров из первоначального описания.

Д.А. Кулешов / D.A. Kuleshov

Anaesthetis flavipilis Baeckmann, 1903

Рис. 1-4

Род *Anaesthetis* Dejean, 1835 в мировой фауне насчитывает 6 видов, 3 из которых встречаются на территории Российской Федерации. *Anaesthetis testacea* (Fabricius, 1781) имеет широкое распространение в Европейской части России, заходя в Западную Сибирь до Тюменской области. *A. flavipilis* Baeckmann, 1903 известен по типовому местонахождению в Алтайском крае (окрестности Барнаула) и *A. confossicollis* Baeckmann, 1903 известен с Амурской области и далее на восток до юга Приморского края и Южного Сахалина.

Нахождение *A. flavipilis* Baeckmann, 1903 представляет большой интерес в связи с малой изученностью этого таксона. Известен по двум типовым экземплярам (синтипы), которые хранятся в Зоологическом институте Российской академии наук (ЗИН РАН). Черепанов в своей монографии (1984) указывает на один экземпляр из окрестностей Барнаула, но специальные поиски в коллекции Института систематики и экологии животных - СО РАН г. Новосибирск, где хранится часть коллекции А.И. Черепанова, к успеху не привели. В дальнейшем в литературных источниках информации об этом таксоне обнаружить не удалось. Таким образом это третий достоверно известный экземпляр *A. flavipilis* Baeckmann, 1903.

Экземпляры из типовой серии были собраны 10-13.06.1899 и 02.06.1901. Изученный экземпляр 25-26.06.2024, таким образом фенология охватывает весь июнь. Длинна тела: 3,5 мм.

Материал: Самец, Республика Хакасия, г. Абакан 53.712252°N, 91.508667°E, 25-26.06.2024, С.В. Драган leg.

Благодарности. Автор выражает искреннюю признательность Сергею Драгану (ФГБОУ «Хакасский государственный университет им. Н.Ф. Катанова) за переданный на изучение коллекционный материал. Особую благодарность автор выражает Михаилу Данилевскому (Институт проблем экологии и эволюции им. А.Н. Северцова РАН, г. Москва) за регулярные консультации. Сотрудникам Лаборатории филогении и фауногенеза Института систематики и экологии животных - СО РАН г. Новосибирск, за возможность работы с коллекциями.

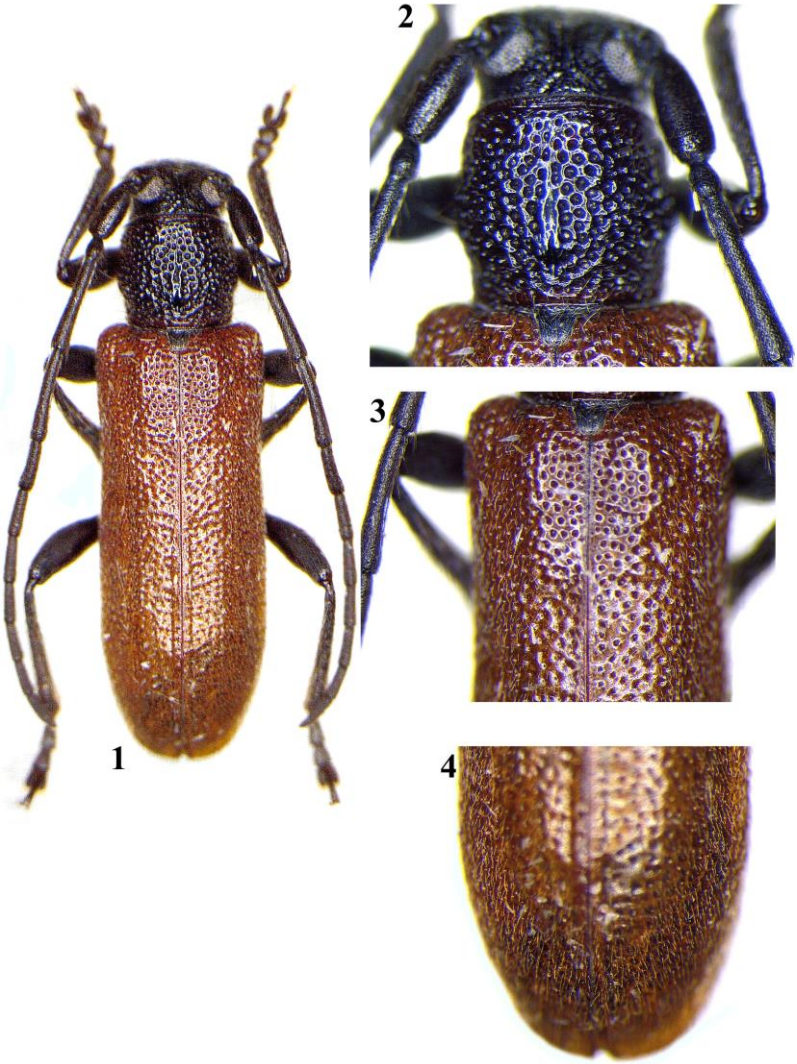


Рис. 1-4. *Anaesthetis flavipilis* Baeckmann, 1903: 1 - общий вид сверху; 2 - вид сверху переднеспинки, 3 - вид сверху надкрылий, 4 - вид сверху вершин надкрылий.

ЛИТЕРАТУРА

Анисимов Н.С., Безбородов В.Г. 2020. Жуки-усачи (Coleoptera, Cerambycidae) Амуро-Зейского междуречья Амурская область, Россия). - Амурский зоологический журнал. 12 (2): 138-157.

Данилевский М.Л. 2023. Жуки-усачи (Coleoptera, Cerambycoidea) России и соседних стран. Часть 3. М.: МАО: 874 с.

Кулешов Д.А., Шамаев А.В. 2023. Новые данные по фенологии и трофической специализации жуков-усачей (Coleoptera, Cerambycidae) на юге Приморского края. - Энтомологическое обозрение. 102. 288-294.

Столбов В.А., Сергеева Е.В., Ломакин Д.Е., Шейкин С.Д. 2019. Аннотированный список жуков усачей (Coleoptera, Cerambycidae) Тюменской области. - Евразиатский энтомологический журнал. 18 (3): 199-212.

Черепанов А.И. 1984. Усачи Северной Азии (Lamiinae: Pterycoptini - Agapanthiini). Новосибирск: Наука, Сиб. отд. 214 с.

Шаповалов А.М. 2012. Жуки-усачи (Coleoptera, Cerambycidae) Оренбургской области. - Труды Оренбургского отделения РЭО, вып. 3. Оренбург: Оренбургское отделение Русского энтомологического общества: 224 с.

Aurivillius C. 1922a. Cerambycidae: Lamiinae I [1921]. Pars 73. - In: Schenkling S (ed.) Coleopterorum Catalogus. Volumen XXIII. Cerambycidae II. Berlin: W. Junk: 1-322.

Baeckmann J.N. 1903b. Die paläarktischen Vertreter der Gattung Anaesthetis Mulsant (Coleoptera, Cerambycidae). - Revue russe d'entomologie. 3: 393-396.

Breuning S. 1975b. Révision de la tribu des Rhodopinini Gress. de la région asiato-australienne (Coleoptera, Cerambycidae) (première partie). Paris: Sciences Nat: 1-70.

Tavakilian G, Chevillotte H 2024. Titan: International Database on Worldwide Cerambycidae or Longhorn Beetles. http://titan.gbif.fr/index.html (01.11.2024).

Поступила / Received: 10.12.2024
Принята / Accepted: 07.02.2025

Humanity space *International almanac* VOL. 14, No 1, 2025: 29-79
Гуманитарное пространство *Международный альманах* ТОМ 14, № 1, 2025: 29-79
http://zoobank.org/urn:lsid:zoobank.org:pub:4DAE5E92-C9ED-4FBA-AFE2-007D9E789503
DOI: 10.24412/2226-0773-2025-14-1-29-79
EDN: QSBOZA

To the taxonomy of *Agapanthia dahlii* (Richter, 1821) (Coleoptera, Cerambycidae) subspecies distributed from West Europa to Russia, Near East and Central Asia with several new descriptions

M.A. Lazarev

Free Economic Society of Russia, Department of Scientifics Conferences and All-Russian Projects
Tverskaya str., 22b, Moscow 125009 Russia
e-mail: cerambycidae@bk.ru; humanityspace@gmail.com
ORCID 0000-0002-4040-0987

Key words: Coleoptera, Cerambycidae, taxonomy, zoogeography, new subspecies, new synonyms, subspecies key.
Abstract. Eight new subspecies are described: *Agapanthia* (*Epoptes*) *dahlii chemalensis* **ssp. n.** (type locality: Chemal, Republic of Altay, Russia), *A.* (*E.*) *d. setosa* **ssp. n.** (type locality: Eğridir environs, Isparta, Turkey), *A.* (*E.*) *d. grossicornis* **ssp. n.** (type locality: Çorum, Turkey), *A.* (*E.*) *d. zaysanensis* **ssp. n** (type locality: Zaysan Lake environs), *A.* (*E.*) *d. zhidkovi* **ssp. n.** (type locality: 55 km S Makanchi, Kazakhstan), *A.* (*E.*) *d. vishnyakovi* **ssp. n.** (type locality: Kitab Natural reserve, Zerafshan mountain ridge, Kashkadarya Region, Uzbekistan), *A.* (*E.*) *d. krivosheinae* **ssp. n.** (type locality: Yangier, Syrdarya Region, Uzbekistan), *A.* (*E.*) *d. revadensis* **ssp. n.** (type locality: Revad environs, Zerafshan valley, Tadzhikistan). Two synonyms are proposed: *A.* (*E.*) *pustulifera* Pic, 1905 = *A.* (*E.*) *mutinensium* Sama & Rapuzzi, 2010, **syn. nov.** = *A.* (*E.*) *subsimplicicornis* Sama & Rapuzzi, 2010, **syn. nov**. New distributional data are represented for 3 subspecies. A key for all subspecies is proposed.

Introduction.

Agapanthia dahlii (Richter, 1821) is a very complicated taxon of many rather different subspecies. According to the last Cerambycidae Palaearctic Catalogue (Danilevsky, 2020), it included 19 subspecies. Recently one new subspecies was described (*A. d. efimovi* Danilevsky, 2021) and the names of 7 species were downgraded to subspecies rank (Lazarev, 2024). Now the species consists of 33 subspecies. Below 8 new subspecies are described and 2 names are accepted as new synonyms.

Materials and methods

Material was collected manually. Specimens used in morphological studies were killed by ethyl acetate. All photographs were taken with Canon PowerShot G10 digital camera equipped with Cannon Zoom lens 5X IS 6.1-30.5 mm 1:2.8-4.5 and microscope AmScope SM745NTP. The illustrations were edited with Adobe Photoshop 7.0 and Helicon Focus 3.20.

Acronyms of collections:
DE - collection of Dmitry A. Efimov (Kemerovo, Russia);
DN - collection of David Navrátil (Litomyšl, Czech Republic);
KH - collection of Karel Hodek (Brno, Czech Republic);
MD - collection of Mikhail L. Danilevsky (Moscow, Russia);
MH - collection of Michal Holomčík (Lužice, Czech Republic);
ML - collection of Maxim A. Lazarev (Moscow, Russia);
SM - collection of Sergey V. Murzin (Moscow, Russia);
VU - collection of Vadim E. Ustinov (Moscow, Russia);
ZIN - collection of Zoological Institute of the Russian Academy of Sciences (Saint-Petersburg, Russia);
ZMM - collection of Zoological Museum of Moscow University (Russia).

Results

A list of *Agapanthia* (*Epoptes*) *dahlii* (Richter, 1821) groups of subspecies

The subspecies could be joined in several related groups on the bases of geographical distribution and natural connections. Subspecies of the first group "*A. d. dahlii*" are distributed from Europe to Siberia and usually have densely pubescent elytra and setae tufts of 3rd antennal joints. Subspecies of the second group "*A. d. walteri*" are distributed in Transcaucasia and neighbor regions and usually characterized by spotted elytra and well developed antennal setae tufts. Subspecies of the third group "*A. d. sicula*" are distributed in West Europe and Near East and usually have rather glabrous elytra. Subspecies of the fourth group "*A. d. muellneri*" are

distributed in Central Asia and are characterized by well-developed elytral pubescence.

The records of *A. dahlii* from China and Mongolia could be connected with unknown subspecies not described yet, or to wrong identifications. No *A. dahlii* from China and Mongolia are known to the author.

I. group *A. d. dahlii* (Richter, 1820)

1. *A. d. dahlii* (Richter, 1821) -Map 1: No 1.
   Type locality. "Hungaria" - after original description.
2. *A. d. kuleshovi* Danilevsky, 2018 - Map 1: No 2.
   Type locality. Russia, Tomsk Region, Belousovo environs, 56°18'13"N, 85°11'53"E.
3. *A. d. efimovi* Danilevsky, 2021 - Map 1: No 3.
   Type locality. Russia, Kemerovo Region, Prokopyevsk District, Karakan Mt. Ridge., 6-7 km from Tykhta.
4. *A. d. chemalensis* **ssp. n.** - Map 1: No 4.
   Type locality. Russia, Republic of Altay, Chemal.
5. *A. d. calculensis* Lazarev, 2013 - Map 1: No 5.
   Type locality. North-east Kazakhstan, the valley of the Sibinka River about 40 km south of Ust-Kamenogorsk, 49°40'27.56"N, 82°39'13.12"E.

II. group *A. d. walteri* Reitter, 1898

6. *A. d. walteri* Reitter, 1898 - Map 1: No 6.
   Type locality. Turkey, Erzurum.
7. *A. d. nitidipennis* Holzschuh, 1984 - Map 1: No 7.
   Type locality. Georgia, environs of the Jvari monastery (41°50′19″N, 44°44′02″E) north of Tbilisi.
8. *A. d. rubenyani* Lazarev, 2013 - Map 1: No 8.
   Type locality. South Armenia, Megri District, mountains above Shvanidzor, 39°13'N, 46°22'44"E, 1600 m.
9. *A. d. ismailovae* Lazarev, 2013 - Map 1: No 9.
   Type locality. Russia, North Cucasus, Dagestan, Rutul environs (41°32'N, 47°25'E).
10. *A. d. persica* Semenov, 1893 - Map 1: No 10.
    Type locality. Iran, Eastern and Central Mazanderan province.

11. *A. d. lenkorana* Lazarev, Plewa & Jaworski, 2016 - Map 1: No 11.
    Type locality. Azerbaijan, Jalal-Abad District, Andreevka environs (Karazenjir, 39°16'N, 48°30'E, 10 m).
12. *A. d. golestanica* Lazarev, Plewa & Jaworski, 2016 - Map 1: No 12.
    Type locality. Iran, Golestan province, 60 km east Minudasht, 460 m, 37°21'36"N 55°55'48"E.
13. *A. d. salviae* Holzschuh, 1975 - Map 1: No 13.
    Type locality. Iran, Elburz, south side, 10 km north of Karaj.
14. *A. d. transcaspica* Pic, 1900 - Map 1: No 14.
    Type locality. Turkmenistan, Ashgabat.

III. group *A. d. sicula* Ganglbauer, 1884

15. *A. d. sicula* Ganglbauer, 1884 - Map 1: No 15.
    Type locality. Italy, Sicilia.
16. *A. d. schurmanni* Sama, 1979 - Map 1: No 16.
    Type locality. Greece, Kastoria.
17. *A. d. malmerendii* Sama, 1981 - Map 1: No 17.
    Type locality. Italia, Romagna, Portico di Romagna [44°1'N, 11°46'E].
18. *A. d. lateralis* Ganglbauer, 1884 - Map 1: No 18.
    Type locality. Turkey, Istanbul Province, Istanbul (Constantinopel).
19. *A. d. pustulifera* Pic, 1905 - Map 1: No 19.
    Type locality. Israel, Jerusalem.
20. *A. d. kindermanni* Pic, 1905 - Map 1: No 20.
    Type locality. Southern Turkey.
21. *A. d. setosa* **ssp. n.** - Map 1: No 21.
    Type locality. Turkey. Isparta, Eğridir environs.
22. *A. d. grossicornis* **ssp. n.** - Map 1: No 22.
    Type locality. Turkey, Çorum.

IV. group *A. d. muellneri* Reitter, 1898

23. *A. d. iliensis* Danilevsky, 2018 - Map 1: No 23.
    Type locality. Kazakhstan, Almaty Region, southern environs of Lake Sorbulak (43°33'57.65"N, 76°36'24.93"E), 670 m.
24. *A. d. alexandris* Pic, 1901 - Map 1: No 24.
    Type locality. Kyrgyzstan, Kyrgyz Ridge (formerly Alexander Ridge); the type most likely comes from the

western (Kazakh) part of the ridge.

25. *A. d. muellneri* Reitter, 1898 - Map 1: No 25.
Type locality. Uzbekistan, Tashkent.
26. *A. d. alaiensis* Kratochvíl, 1985 - Map 1: No 26.
Type locality. Southern Kyrgyzstan at the southern border of the Fergana Valley, Kadamjai (40°7'44"N, 71°43'26"E).
27. *A. d. zaysanensis* **ssp. n.** - Map 1: No 27.
Type locality. East Kazakhstan, Zaysan lake environs, Zhemeney River.
28. *A. d. zhidkovi* **ssp. n.** - Map 1: No 28.
Type locality. Kazakhstan, eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E.
29. *A. d. lepsyensis* Danilevsky, 2018 - Map 1: No 29.
Type locality. Kazakhstan, Lepsy river, 7 km northeast Koilyk (formerly Antonovka), 45°41'36.22"N, 80°17'58.94"E.
30. *A. d. vishnyakovi* **ssp. n.** - Map 1: No 30.
Type locality. Uzbekistan, Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve (about 39°10'30"N, 67°18'43"E).
31. *A. d. krivosheinae* **ssp. n.** - Map 1: No 31.
Type locality. Uzbekistan, Syrdarya Region, Yangier.
32. *A. d. revadensis* **ssp. n.** - Map 1: No 32.
Type locality. Tadzhikistan, Zerafshan valley, Revad environs.
33. *A. d. ustinovi* Danilevsky, 2013 - Map 1: No 33.
Type locality. Tadzhikistan, Pamir, Poshkharv environs [38°24'1"N, 71°9'18"E].

Agapanthia (*Epoptes*) *dahlii* (Richter, 1821)

Saperda cardui, Fabricius, 1775: 186 - "Habitat in Europae australioris carduis"; 1801: 325 (misapplied) - "Habitat in Europae australioris carduis"; Herbst, 1784: 94; Olivier, 1795: N68, p. 9 - "dans les départemens meridionaux de la France", "l'Allemagne".

Saperda nigricornis Fabricius, 1793: 314 (preoccupied) - "Habitat in Europae australioris".

Saperda dahlii Richter, 1821: pl. 12 - "Hungaria".

Agapanthia cardui, Mulsant, 1839: 175 - "la France méridionale et témperée"

Agapanthia lineatocollis, Mulsant, 1863: 358 (misapplied) - France, "les zones témperées ou méridionales".

Agapanthia gyllenhali Ganglbauer, 1883: 190 (= *cardui*, F. = *lineatocollis*, Muls.) - "E. md.".

Agapanthia dahli, Ganglbauer, 1884: 541 - "Mittel- und Süd-Europa, Caucasus, Kleinasien, Syrien"; Reitter, 1898: 133 - "Mittel- und Südeuropa, Kaukasus; dann angeblich auch in Kleinasien und Syrien"; 1913: 66 - "Süddeutschl., Nassau, Böhmen"; Stierlin, 1898: 498 - "Genf, Aarau, Dübendorf, Glarner Alpen"; Everts, 1901: 386; Csiki, 1905: 64 - Hungary; Schaufuß, 1916: 876 - "Mittel- u. Südeuropa"; Plavilstshikov, 1927: 61 - "au Caucase, en Transcaucasie, dans le Turkestan boréal, la Sibérie mér. occ., et la Russie d'Europe moyenne et méridionale"; 1929: 103, part. (= *kindermanni* Pic, 1905); 1932: 194; 1965: 416 - the south and center of the European part of the USSR, Caucasus, Western Siberia; Chernyshev, 1930: 12 - Bryansk province; Esterberg, 1935: 197 - Gorky and Kirov regions; Zaitzev, 1954: 18, part. - Georgia: (Borjomi, Eldar, Tbilisi, Manglisi, Gagra), All Transcaucasia, Europe, Siberia, Western. Asia; Yablokov-Khnzoryan, 1961: 78 - Europe, including Armenia; Breuning, 1961: 185, part. - "Eur. centr. et mer., As. occ. et centr."; Abai, 1969: 53, part. - Iran: Gorgan, Khorassan; Kostin, 1973: 224 - Kazakhstan; Shernin, 1974: 181 - Urzhum, Kirov region; Villiers, 1978: 431, 434 - "Europe centrale et méridionale, Sibérie occidentale, Caucase, Proche et Moyen-Orient; Sama, 1979: 506, 511; 2003: 93 - Europe, Western Türkiye, Caucasus, Transcaucasia, Siberia to Lake Baikal; Miroshnikov, 1984: 280 (larva); Tsherepanov, 1985: 246 - Europe, Western Siberia; Novozhenov, 1987: 45 - Ilmensky Reserve; Rabil, 1992: 148 - "Forêt de la Grésigne (Tarn)"; Bense, 1995: 400-401 - Western Europe; Carrière, 1996a: 562 - "Hérault"; 1996b, 110, 111 - "Portiragnes; Pech Blanc, Etang de Vendres"; Alexandrovich et al., 1996: 48 - southeast of Belarus; Althoff & Danilevsky, 1997: 40 - Europe; Kasatkin & Arzanov, 1997: 67 - Rostov Region, Volgograd Region, Astrakhan Region, Kalmykiya, Krasnodar Region, Karachay-Cherkessia, Checheno-Ingushetia, Dagestan; Matveev, 1998: 87 - Mari El, Tatarstan, Kirov, Nizhny Novgorod Regions; Secchi, 1998: 227 - "Loiret: Meung-sur-Loire"; Kovács, 1998: 254 - Hungary; Efimov, 2001: 69 - Kemerovo Region; Hua, 2002: 191, part. - China; Former USSR, Mongolia; Brustel et al., 2003: 452; Isaev et al.., 2004: 41 - Tatarstan, Ulyanovsk and Samara Regions; Diego Barquín & Martínez-Porres Cáceres, 2005: 145 - Spain: Cantabria; Sautière, 2005: 21 - Montlouis-sur-Loire (Indre-et-Loire); Verdugo, 2008: 484 - Andalucía: Calar Alto, término municipal de Bacares, Almería; Mouthiez & Péru, 2008: 110 - Loiret; Sama et al., 2008: 122, part. - "absent in Iran"; Kadyrbekov & Tleppaeva, 2008: 54 - tugai forests of Semirechye and the steppe belt of the Dzhungar Alatau and Northern Tien Shan; Tiberghien, 2010: 63 - Zaragoza; Gnjatović & Žikić, 2011: 36 - Montenegro; Hernández, 2011: 257 - Lerma (Burgos); Danilevsky, 2012: 153 - Palaearctic, including Belgium but excluding Korea; Zamoroka et al., 2012: 1167 - Western Podillya, Ukraine (East Pokuttya, Khotyn Eminence); Švácha & Lawrence, 2014: figs 2.4.20 T (larva), 2.4.32 M (nymph female); Dobrosavljević & Mihajlović, 2014: 26 - Serbia; Pavićević et al., 2015: 83 - Serbia; Kulenko, 2015: 1104 - Russia, Samara Region: (Tolyatti,

Zhigulevsk); Molnar et al., 2016: 49 - Hungary (Fundoklia Valley); Danilevsky, 2017: 28 - South-West Siberia; Touroult et al., 2019: 107 – France; Nikitsky, 2019: 575 - Moscow Region.

Agapanthia dahlii, Seidlitz, 1891b.: 850 (= *cardui*, F. = *lineatocollis*, Muls.) - "In Eur. bis Ostpr. (?)".

Agapanthia (s. str.) *dahli*, Aurivillius, 1923: 461 - Mittel- und Süd-Europa; Martynov & Pisarenko, 2004: 64 - Lugansk and Donetsk Regions.

Agapanthia (*Agapanthiella*) *dahlii*, Pesarini & Sabbadini, 2004: 127, part.; Danilevsky, 2006: 49 - Moscow Region; Özdikmen, 2007: 348, 392 - Europe, European Russia, European Kazakhstan, Siberia, Central Asia, ?Mongolia, China, Caucasus, Transcaucasia, Near East, Turkey, Iran; Listvyagova et al., 2013: 28 - Republic of Khakassia, Krasnoyarsk Krai.

Agapanthia (s. str.) *dahli dahli*, Bartenev, 2004: 387 - Europe, Caucasus and Transcaucasia, "Northern Iran, Syria, Turkey, Palestine, Northwestern Kazakhstan, Uzbekistan, Turkmenistan, Southwestern Siberia.

Agapanthia (*Epoptes*) *dahli*, Löbl & Smetana, 2010: 215; Drumont & Leduc, 2011: 293, 295 - "Belgique: province de Namur"; Shapovalov, 2012: 184 - Russia east to approximately Lake Baikal, Europe, "Caucasus, Central Asia, possibly also northwestern Mongolia and northwestern China"; Steiner & Schmid, 2013: 2 - "Griechenland"; Klausnitzer et al., 2016: 557 - Mitteleuropa; Stolbov et al., 2019: 209 - Russia (Tyumenskaya Oblast); Özdikmen, 2021: 1352; Zamoroka, 2022: 64 - Ukraine; Trócoli et al., 2023: 245 - "España (Barcelona, Catalunya): Moianès"; Danilevsky, 2020: 301, 302 - center and south of European Russia, Western Siberia, Kazakhstan, Belarus, Moldova, Ukraine, Georgia, Armenia, Azerbaijan, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Afghanistan, Iran, Turkey, China, Western Europe.

Agapanthia dahli dahli, Sláma, 1998: 350 - Czech Republic, Slovakia; Bartenev & Terekhova, 2011: 139 - Left Bank Ukraine and Crimea; Lazarev, 2013a: 443 (new Asian subspecies); 2013b: 128, 129, figs 4-5 (Samara) - Central Russia.

Agapanthia (*Epoptes*) *dahli dahli*, Mikhailov, 1999: 230 - Arkim; Georgiev, Gjonov & Sakalian, 2015: 82 - "Strandzha Mountain (Turkey: Kömürköy Köyü)"; Miroshnikov, 2011: 262; Danilevsky, 2014: 219; Gradinarov & Petrova, 2019: 70 - Bulgaria: Vrachanski Balkan Nature Park; 2020: 174 - Bulgaria: Sarnena Sredna Gora Mountains; Gradinarov et al., 2020: 106 - Bulgaria; Danilevsky, 2020: 302 - center and south of European Russia, Western Siberia, Kazakhstan, Belarus, Moldova, Ukraine, Georgia, Armenia, Azerbaijan, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Afghanistan, Iran, Turkey, China, Western Europe; Danilevsky, 2024: 153.

Agapanthia (*Agapanthiella*) *dahli dahli*, Shapovalov et al., 2006: 107 - Orenburg Region.

Agapanthia (*Epoptes*) *dahlii*, Lin & Tavakilian, 2019: 226 - "China, Mongolia, Russia, Uzbekistan, Kazakhstan, Turkey, Georgia; Europe".

Type locality. "Hungaria" - according to the original description.

Extremely variable species with huge area. Many local forms were originally described as species or accepted as species after original publication. All forms are characterized by red basal parts of 3rd - 12th joints; pubescence of the light parts of antennal joints usually white, but sometimes yellowish; antennal length usually variable in each population from about 2 times longer than body in males protruding beyond elytral apices with 7th joint, in females - with 8th joint; elytral pubescence from pale-yellow, to dark-yellow or orange; always more or less spotted; spots can be rather contrast or partly conjugated; very rare (*A. d. efimovi*) elytral pubescence about uniform without spots; erect setae are usually distinct along anterior elytral half or anterior two-thirds, or up to elytral apex, and often variable inside one population; one of the most typical species character is the presence of long and dense setae tuft at the apex of 3rd antennal joint, which can be completely absent in some northern populations or sometimes in certain southern; sometimes poorly developed setae tuft can be seen at the apex of 4th joint; definite specimens can have more or less contrast grey stripe along humeri; body length in males: 9.5-21.4 mm, in females - 10.5-22.5 mm.

Distribution. From Pyrenean Peninsula to Eastern Siberia; the species is known from Omsk, Tomsk, Novosibirsk and Kemerovo regions, as well as from Altay Region; Kazakhstan (including Zaysan Depression), Central Asia, Caucasus with Transcaucasia, Near East including Iran; in Europe the species does not reach Poland; in East Asia it penetrates to China and Mongolia (Lin & Tavakilian, 2019).

All records for Baykal environs (Cherepanov, 1984; Sama, 2002; Shapovalov, 2012; Danilevky, 2023) were connected with wrong Cherepanov's identification of *Ag. alternans* Fischer von Waldheim, 1842.

Biology. Larvae develop in stems of various herbaceous plants: *Althaea, Arctium, Cannabis, Carduus, Carthamus, Cichorium, Cirsium, Conium, Daucus, Dictamnus, Dipsacus, Eremurus, Eupatorium, Helianthus, Heracleum, Laserpitium, Latuca, Malva, Melilotus, Onopordum, Pyrethrum, Pastinaca, Sambucus, Sonchus* and others; certain populations may clearly exhibit oligophagy or even monophagy; in Europe preference is usually noted for such *Asteraceae*

as *Carduus*, *Cirsium* and *Onopordum*; in Eastern Siberia and Kyrgyzstan they are known only on *Malvacea* (usually *Althaea*). According to Danilevsky (2023), in Novorossiysk (Gayduk) and in Crimea (Koktebel) beetles were observed only on *Asphodelina*. It can be assumed that food specialization demonstrates reproductive isolation of the corresponding populations.

According to Tsherepanov (1984): The entire development cycle is completed within one or two years, because a part of the population pupates after the first winter, and the rest remains for the second winter.

1. *Agapanthia* (*Epoptes*) *dahlii dahlii* (Richter, 1820)

Saperda dahlii Richter, 1822: pl. 12 - "Hungaria".

New material. 18 males, 7 females, Kazakhstan, Bey-Chogur, Turgay Region, 25.5.-13.6.1916, P. Zikharev & Pania - ZMM; 1 female, Kazakhstan, Akmolinsk Region, lake Usu-Kul, 1912, Maltsev - ZMM; 1 female, Kazakhstan, Akmolinsk Region, Kunduzda River, 29.6.-1.7.1900, Balykleysky leg. - ZIN.

Distribution. North of the species area from Pyrenees to Urals with Sverdlovsk and Tyumen regions; North Caucasus, Crimea, Georgia (part.), North and Central Kazakhstan (part.).

2. *Agapanthia* (*Epoptes*) *dahlii kuleshovi* Danilevsky, 2018

Agapanthia (*Epoptes*) *dahli kuleshovi* Danilevsky, 2018: 179 - "Russia, Tomskaya Obl., Belousovo env., 56°18'13"N, 85°11'53"E", "Tomskaya Obl., Kozhevnikovo Distr., Osinovka (55°57'23"N, 83°29'18"E) env."; Danilevsky, 2020: 302 - Western Siberia (Tomsk Region); 2023: 583.

New material. 2 males, 1 female, Russia, West Siberia, Kurgan Region, 120 km W Kurgan, 150 m, 4.7.2002, M. Danilevsky - MD; 1 female, 50 km W Kurgan, 24.6.2003, A.A. Safronov - MD; 4 males, 1 female, Omsk Region, Bolsheukovsky District, Bolshiye Uki, 29.5.-9.7.2007, V. Teploukhov - VU; 2 males, 1 female, Bolsheukovsky District, Belogrivka environs, 18.6.2016, V.H. Teplov - VU.

Distribution. West Siberia of Russia, Kurgan and Tomsk Region.

3. *Agapanthia* (*Epoptes*) *dahlii efimovi* Danilevsky, 2021

Agapanthia dahli, Efimov, 2001: 69 - Kemerovo Region.

Agapanthia (*Epoptes*) *dahli efimovi* Danilevsky, 2021: 450 - "Russia, Kemerovo Reg., Prokopyevsk Distr., Karakan Mt. Ridge., 6-7 km from Tykhta", "Prokopyevsk Distr., 7 km NE Oktyabrsky Lug, 54°17'N, 86°55'E", "Belovo Distr., NW of Karakan Mt Ridge", "Kemerovo Distr., Staraya Balakhonka, 55°31'44.1"N, 85°53'23.8"E", "Krapivinsk Distr., 8 km SSW Saltymakovo", "Chebulinsk Distr., 9 km S Chumay, mouth of Kozhukh River, 55°39.5'N, 87°49.5'E", "Chebulinsk Distr., Shestakovo, 55°52'59.8"N, 87°59'8.6"E", "Chebulinsk Distr., Shestakovo", "Krapivinsk Dist., 8 km SSW Saltymakovo, 54°45'46"N, 87°1'27"E"; 2023: 583.

New material. 1 male, Kemerovo Region, Kemerovo, Sosnovy Bor, 3.6.2006, D. Sidorov - DE; 1 female, Kemerovo Region, Kemerovo, Kuzbass Botanical Garden, Sukhovskoe Lake, 16-20.6.2003, A. Azimov, E. Maksimenko - DE; 1 female, Kemerovo Region, Chebulinsk District, mouth of river Kozhukh and Kiya, VII.2016, S.Luzyanin - DE; 1 female, Kemerovo Region, Yashkino District, Yurts-Konstantinovs, 56.0659°N 84.9863°E, 2.7.2023, D. Sidorov - DE; 1 male, Russia, Republic of Khakassia, Mayna, 2.7.1970, M. Milov - MD; 3 males, 2 females, Russia, Altay, Gorno-Altaysk (north), 850 m, 20.6.1989, S. Saluk - MD; 1 male, 1 female, Russia, Novosibirsk Region, Kochenevo District, Novomikhaylovka, 8.7.1987, V. Grachev - MD; 1 female, Novosibirsk Region, Maslyanino District, Bubenchikovo, 1954, Lurye - ZMM; 1 female, Novosibirsk Region, Kargat District, Rovenskiy, 6.7.1967, V. Kuznezov - ML; 1 male, 1 female, Siberia, Minussinsk, 22.6.-30.6.1908 - ZMM.

Distribution. West Siberia of Russia (Novosibirsk Region, Altay Republic, Kemerovo Region, Khakassia Republic).

4. *Agapanthia* (*Epoptes*) *dahlii chemalensis* ssp. n.

Fig 1

Type locality. Russia, Republic of Altay, Chemal.

Only one female available; body black with numerous erect black setae; moderately wide; head with dense yellow pubescence, condensed along frons and between antennal bases, rather pale in

Fig 1. *Agapanthia* (*Epoptes*) *dahlii chemalensis* **ssp. n.**: Holotype, female, Russia, Republic of Altay, Chemal, 20.6.1988, E. Matveev.

front of eyes; genae about as long as lower eye lobes, covered with yellow pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes about equal to the width of 1st antennal joint; frons elongate; antennae relatively thick, protruding beyond elytral apices with 4 joints; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about ¼ of its length and here with distinct setae tuft, consisting of several dense short setae; 4th antennal joint with less developed setae tuft; other antennal joints with a few short erect setae apically; prothorax strongly widened posteriorly, much wider than long; pronotum with wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense yellow pubescence; elytra about 2.9 times longer than wide; with moderately dense yellow pubescence; small glabrous elytral areas nearly indistinct; elytral setae spots more or less distinct; grey humeral elytral stripe absent; elytral apices rounded, erect elytral setae distributed to about elytral middle; ventral body side with very dense and regular yellow pubescence: body length: 14.4 mm; width: 4.5 mm.

Differencial diagnosis. The taxon is close to *A.* (*E.*) *d. efimovi* Danilevsky, 2021, but antennae distinctly thicker, with dense setae tufts rather distinct in 4th joint also; frons with denser pubescence; elytra with sparser paler pubescence.

Material. Holotype, female, Russia, Republic of Altay, Chemal, 20.6.1988, E. Matveev - MD.

Distribution. Russia, Republic of Altay, Chemal environs.

5. *Agapanthia* (*Epoptes*) *dahlii calculensis* Lazarev, 2013

Agapanthia dahli calculensis Lazarev, 2013b: 128 - North-east Kazakhstan: Sibinka river [49°40’27.56”N, 82°39’13.12”E]; Putintzevo env., 20 km N Zyriyanovsk, Maralikha Mt.; S. Uskaman city; 2014: 278 - North-east Kazakhstan, Sibinka River; Karpiński et al., 2018: 88 - East Kazakhstan Region; Almaty Region; Danilevsky, 2020: 302 - Kazakhstan.

New material. 1 female, Kazakhstan, Marka-Kol District, Chernyaevka, Kalodzhar River, 11.6.1986, V. Shilenkov - MD; 1 male, 1 female, Kazakhstan, Kalbinsky Ridge, Samarka, 600 m, 22.4.2002, M. Danilevsky - MD.

Distribution. North-East Kazakhstan; Sibinka River valley approximately 40 km south of Ust-Kamenogorsk, 49°40'28"N, 82°39'13"E; Mount Maralikha (670 m, 49°50'59"N, 84°22'53"E) in

the vicinity of Putintsevo, which is 20 km north of Zyryanovsk; the southern outskirts of Ust-Kamenogorsk (450 m, 49°51'45"N, 82°37'54"E); Berezovka (49°41'N, 83°25'E), 7 km east of Serebryansk; the Larikha Mountains (49°49'6"N, 84°26'31"E), 15 km northeast of Zyryanovsk; Marka-Kol District, Chernyaevka, Kalodzhar River; Kalbinsky Ridge, Samarka, 600 m.

6. *Agapanthia* (*Epoptes*) *dahlii walteri* Reitter, 1898

Figs 2-5

Agapanthia walteri Reitter, 1898: 132 - "Armenien: Erzerum. Kleinasien: Mardin"; Winkler, 1929: 1213, part.; Plavilstshikov, 1932: 194; Zaitzev, 1954: 18 - Borjomi, Armenia, Nakhkrai, M. Asia; Breuning, 1961: 185 - "As. occ. mer."; Villiers, 1967: 369 - "Asie Mineure, Transcaucasie, Iran"; Abai, 1969: 53 - Iran: Mazandaran, Gorgan, Azarbaidjan, Kermanschahan; Fuchs & Breuning, 1971: 437 - "Anatolie: Yenisehir (Hatay); Zw. Yüksekova u. Semdinli (Hak.); Tunceli"; Kasatkin & Arzanov, 1997: 67 - Chechnya: Petropavlovskaya; Adlbauer, 1988: 289 - "30 km E Bingöl", "NW Yüksekova, Prov. Hakkari"; Danilevsky, 1993: 39 (= *A. salviae*, Kazjutshits, 1988); Holecová et al., 2002: 10 - Armenia; Rejzek et al., 2003: 170 - "SE. Turkey: Alannyurt E. Gercüş"; Sama et al., 2005: 130 - Iran, Fars.

Agapanthia dalhi var. *erivanica* Pic, 1900: 14 - "Arménie: Erivan".

? *Agapanthia dahli* var. *theryi* Pic, 1908: 6 - "Perse: Sultanabad".

Agapanthia (s. str.) *dahli*, Pic, 1910: 96 (= *erivanica* Pic), part.; Aurivillius, 1923: 461 (= *cardui*, F. = *gyllenhali* Ganglb. = *erivanica* Pic = *lineatocollis*, Muls. = *nigricornis* F. = *theryi* Pic), part. - "Mittel- und Südeuropa", "Armenien", "Persien"; Plavilstshikov, 1930: 25, 39 ("Syn.: *A. lineatocollis* Muls. 1863, *A. cardui* Herbst, 1784, *A. nigricornis* F. 1792"; "ab. *erivanica* Pic"), part. - "Europa (von Deutschland bis Spanien, Serbien, Italien u.s.w.), Mittel- und Süd-Russland, Kaukasus, Transkaukasien, Persien, Syrien, Klein-Asien"; 1948: 168, part. - All Armenia; 1968: 121, 147 (= *nigricornis* F. = *erivanica* Pic) – (throughout the middle and southern Europe), (In the European part of the USSR... north to Chernigov, Tula, Kazan, Kirov, Perm), (Crimea, Caucasus, all Transcaucasia, northwestern Kazakhstan, Uzbekistan), (Northern Iran, Turkish Armenia, Asia Minor, Syria).

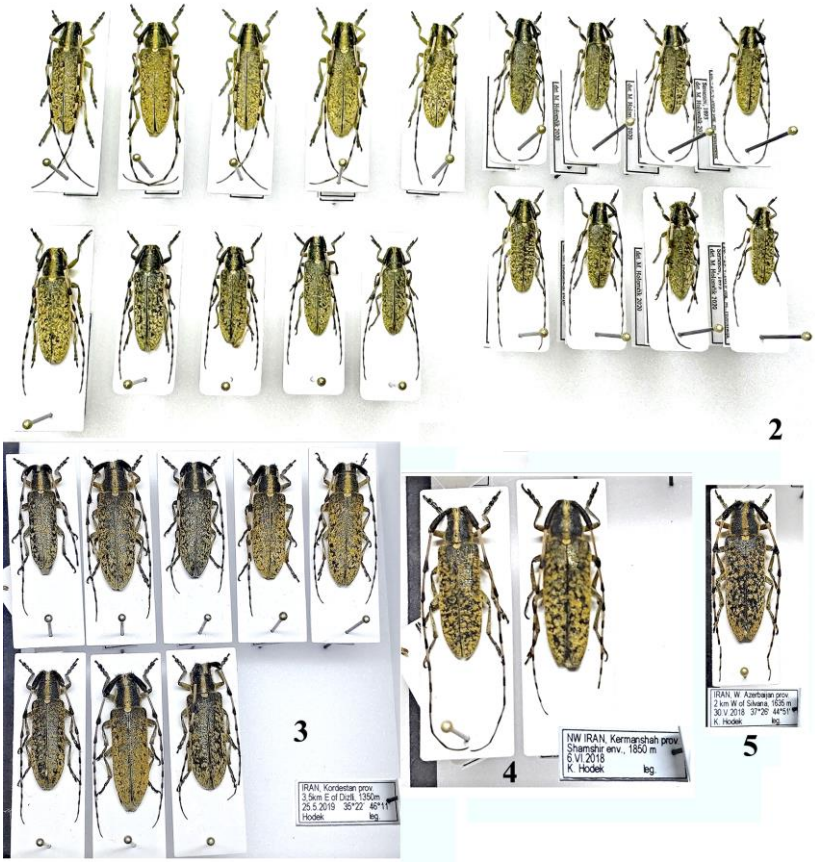
Agapanthia (s. str.) *walteri*, Pic, 1910: 96 - "Arm., Anat."; Aurivillius, 1923: 467 - Armenien, Kleinasien; Plavilstshikov, 1930: 24, 39 - "Transkaukasien (Erivan, Daralages u.s.w.), Armenien (Ordubad, Kagyzman, Erzerum), Mardin, Anatolien, Klein-Asien"; 1948: 168, part. - Alagez, Araks Valley, Daralagez, Zangezur; 1968: 121, 146 - Armenia, Nakhichevan Autonomous Soviet Socialist Republic. Central and northeastern Turkey; Lobanov et al.., 1982: 269; Danilevsky & Miroshnikov, 1985: 387, 390.

Agapanthia (s. str.) *dahli* var. *erivanica*, Aurivillius, 1923: 461 - "Armenien".

Agapanthia (s. str.) *dahli* var. theryi, Aurivillius, 1923: 462 - Persien.

Agapanthia dahli m. *erivanica*, Breuning, 1961: 185.
Agapanthia dahli m. *theryi*, Breuning, 1961: 185.
Agapanthia salviae, Kazjutshits, 1988: 584 - Armenian SSR, Khosrovsky reserve, Vedinsky section.
Agapanthia dahli, Winkler, 1929: 1213, part. (including ab. *erivanica* Pic).
Agapanthia (*Agapanthiella*) *walteri*, Pesarini & Sabbadini, 2004: 127.
Agapanthia (*Epoptes*) *walteri*, Löbl & Smetana, 2010: 216 - Azerbaijan, Armenia, Georgia, Iran, Turkey; Barimani Varandi et al., 2010: 54 - Iran, Mazandaran; Özdikmen, 2013: 22 - "Turkey: Erzurum, Mardin, Hakkari, Tunceli, Bingöl, Amasya, Karş, Batman"; 2021: 1352; 2024: 1965, 2476 - Black Sea (Amasya, Artvin, Bayburt, Gümüşhan), Central Anatolian Region (Çankırı), Eastern Anatolian Region (Bingöl, Erzurum, Hakkâri, Kars, Muş, Tunceli), Mediterranean Region (Hatay), South-Eastern Anatolian Region (Batman, Mardin, Siirt, Şırnak).
Agapanthia (*Epoptes*) *dahli*, Sakenin et al., 2011: 7 - "Iran: Ardabil province: Ardabil".
Agapanthia dahli walteri, Lazarev, 2013a: 443 - Central Transcaucasia.
Agapanthia (*Epoptes*) *dahli walteri*, Danilevsky, 2014: 219; 2020: 302 - Azerbaijan, Armenia, Georgia, Iran, Turkey; 2023: 584 - Armenia, Transcaucasia, Turkey, Iran.
Agapanthia (*Epoptes*) *dahlii walteri*, Kasatkin, 2020: 243.

New material. 1 male, Georgia, [Borzhom, Gori District, Tiflis Region, Christof leg. - in Russian] - ZIN; 1 male, 1 female, Iran [Western Persia, Luridtan, Bolkha, 27.5.1914, Nesterov - in Russian] - ZIN; 1 male, 1 female. Iran, Qazvin prov., 4 km W Kouhin, 1500 m, 36°22'N, 49°37'E, 31.5.2015, K. Hodek - MD; 1 male, 1 female, Iran, Kermanshah prov., Shamshir env., 1850 m, 6.6.2018, K. Hodek - KH; 1 female, Iran, W Azerbaijan prov., 2 km W Silvana, 37°26´N, 44°51´E, 1635 m, 30.5.2018, K. Hodek - KH; 1 male, 7 females, Iran, Kordestan prov., 3.5 km E Dizll, 35°22´N, 46°11´E, 1350 m, 25.5.2019, K. Hodek - KH; 14 males, 4 females, Iran, Qazvin prov., 54 km NW of Qazvin, Kouhin env., 36°22'18.0051"N, 49°37'9.0083"E, 1520 m., 28- 29.5.2019, M. Holomčík - MH; 1 male, Iran, Qazvin prov., 4 km W Kouhin, 1500 m, 36°22'18.12"N 49°37'8.82"E, 30.5.2019, D. Navrátil - DN; 5 males, 4 females, Iran, Qazvin prov., 4 km W Kouhin, 1500 m, 36°22'18.12"N, 49°37'8.82"E, 30.5.2019, K. Hodek - KH; 1 male, Iran, Kermanshah prov., Shamshir env., 34°59´14.70"N, 46°25´36.71"E, 1830 m, 26.5.2017, D. Navrátil - DN; 1 male, Iran, Kurdistan, Divandareh-city, Saral, 12.5.2016, Fardin Faizi - MD.
Distribution. Azerbaijan, Armenia, Georgia, Iran, Turkey.



Figs 2-5. *Agapanthia* (*Epoptes*) *dahlii walteri* Reitter, 1898: 2 - 14 males, 4 females, Iran, Qazvin prov., 54 km NW of Qazvin, Kouhin env., 36°22'18.0051"N, 49°37'9.0083"E, 1520 m., 28-29.5.2019, M. Holomčík; 3 - 1 male, 7 females, Iran, Kordestan prov., 3.5 km E Dizll, 35°22′N, 46°11′E, 1350 m, 25.5.2019, K. Hodek; 4 - 1 male, 1 female, Iran, Kermanshah prov., Shamshir env., 1850 m, 6.6.2018, K. Hodek; 5 - 1 female, Iran, W Azerbaijan prov., 2 km W Silvana, 37°26′N, 44°51′E, 1635 m, 30.5.2018, K. Hodek. (Photos by K. Hodek & M. Holomčík).

9. *Agapanthia* (*Epoptes*) *dahlii ismailovae* Lazarev, 2013

Agapanthia dahli ismailovae Lazarev, 2013a: 446 - "North Cucasus, Dagestan, Rutul env.".

Agapanthia (*Epoptes*) *dahli ismailovae*, Danilevsky, 2020: 302 - South of European Russia (Dagestan), Azerbaijan; 2023: 585 - Mountains of Dagestan (the environs of the village of Rutul, 41°32'N, 47°25'E) and northeastern Azerbaijan (the environs of the village of Altyagach, 1030 m, 40°52'32"N, 48°56'23"E).

New material. 1 female, "Aresch / Caucasus / A. Schelkownikow" - ZMM.

Distribution. Russia, Dagestan; Azerbaijan (Altyagach, Aresh).

13. *Agapanthia* (*Epoptes*) *dahlii salviae* Holzschuh, 1975

Figs 10-18

Agapanthia (s. str.) *salviae* Holzschuh, 1975: 88 - "Elburz, Südseite, 10 km nördlich Karadj".

Agapanthia (*Agapanthiella*) *salviae*, Pesarini & Sabbadini, 2004: 127.

Agapanthia (*Epoptes*) *salviae*, Löbl & Smetana, 2010: 216 - Iran; Danilevsky, 2020: 303 - Iran "Elburz, Südseite, 10 km nördlich Karadj".

Agapanthia (*Epoptes*) *dahli salviae*, Lazarev, 2024: 31.

Type locality. Iran, Elburz, south side, 10 km north of Karaj.

The taxonomy position of *A. salviae* Holzschuh is not clear. The type series as well as many new series collected in the type locality contain several specimens without setae tufts on 3rd antennal joints - a single distinguishing character of *A. salviae*. All known *A. salviae* were collected together with *A. dahli walteri* and all on same food plant (*Salvia*). Most probably all *A. salviae* are just a rare morphological form of *A. dahli walteri*.

New material. 1 male, Iran, Ardabíl prov., Shormineh env., 37°27'N, 48°13'E, 1370 m, 26.5.2018, K. Hodek - KH; 3 males, 1 female, Iran, Ardabíl prov., Askestan env., 37°28'N, 48°39'E, 1750 m, 26.5.2018, K. Hodek - KH; 1 male, Iran, Ardabíl prov., Askestan env., 37°28'20.57"N, 48°39'29.26"E, 1750 m, 27-29.5.2019, D. Navrátil - DN.

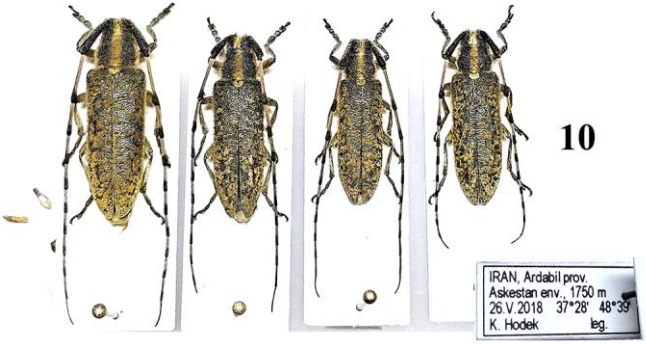
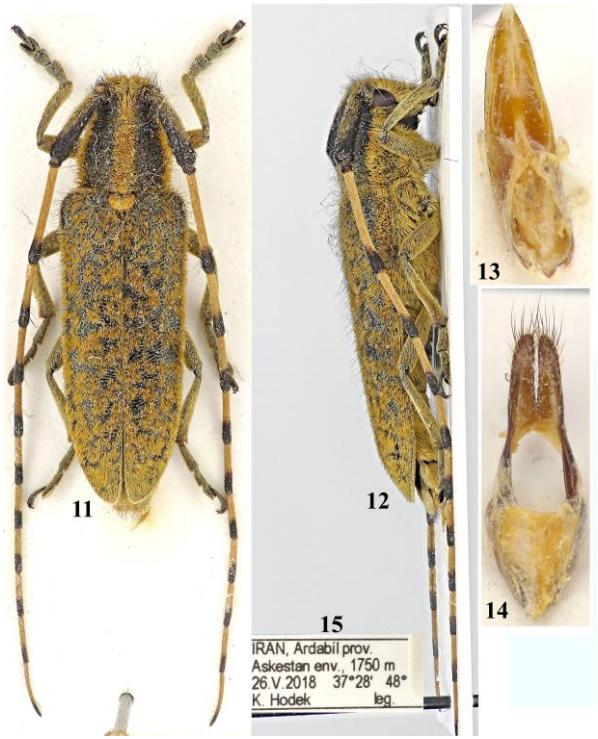
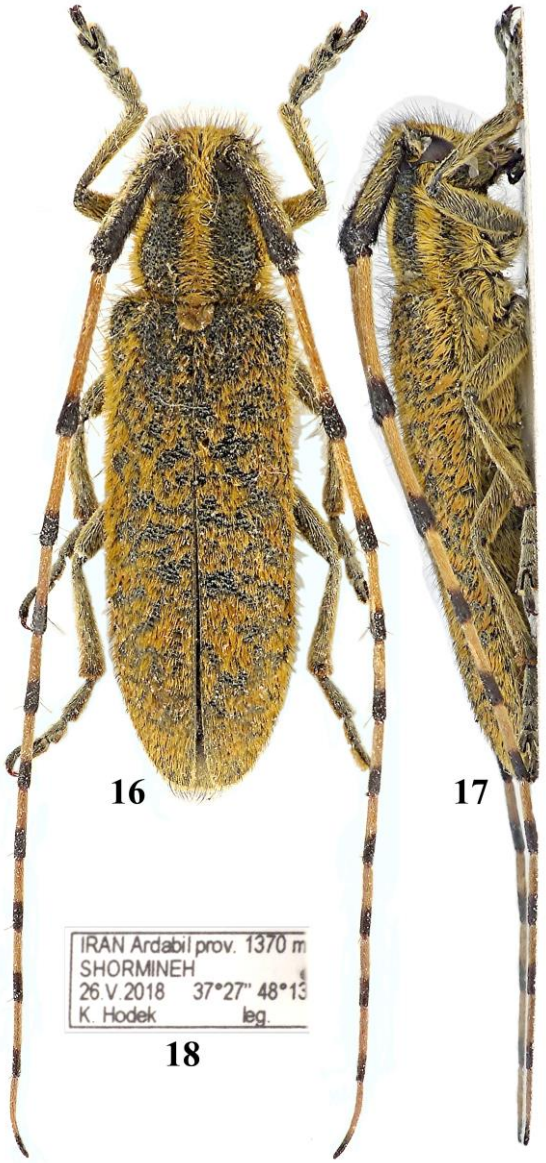


Fig. 10. *Agapanthia* (*Epoptes*) *dahlii salviae* Holzschuh, 1975: 3 males, 1 female, Iran, Ardabíl prov., Askestan env., 37°28'N, 48°39'E, 1750 m, 26.5.2018, K. Hodek (Photos by K. Hodek).



Figs 11-15. *Agapanthia* (*Epoptes*) *dahlii salviae* Holzschuh, 1975: male, with same label (11 - view from above, 12 - lateral view, 13 - penis, 14 - parameres, 15 - label) (Photos by K. Hodek).



Figs 16-18. *Agapanthia* (*Epoptes*) *dahlii salviae* Holzschuh, 1975: male, Iran, Ardabíl prov., Shormineh env., 37°27'N, 48°13'E, 1370 m, 26.5.2018, K. Hodek (16 - view from above, 17 - lateral view, 18 - label) (Photos by K. Hodek).

19. *Agapanthia* (*Epoptes*) *dahlii pustulifera* Pic, 1905

Agapanthia pustulifera Pic, 1905: 12 - "Jérusalem".

Agapanthia (Agapanthiella) pustulifera, Pesarini & Sabbadini, 2004: 127.

Agapanthia (*Epoptes*) *mutinensium* Sama & Rapuzzi, 2010b: 179, **syn. nov.** - "N. Liban, Akkar, Abboudiyeh"; Cocquempot et al., 2016: 99 - Lebanon: "Batloun El Shouf (= Batloun, Mont Liban)", "Aitat (Aley, Mont Liban)"; Danilevsky, 2020: 303 - Lebanon.

Agapanthia (*Epoptes*) *subsimplicicornis* Sama & Rapuzzi, 2010b: 180, **syn. nov**. - "Liban: Environs de Chtaura", "Caza Bcharré: Bcharré", "Bekaa, Ras el Assi, Nahr el Assi, 680 m, N 34°21'06", E 36°22'36"; Sama et al., 2010a: 34 - Lebanon, ?"Israel - Carmel" (*Agapanthia* (*Epoptes*) sp.); Cocquempot et al., 2016: 99 - Lebanon, "Baalbeck, Bekaa"; Danilevsky, 2020: 303 - Lebanon.

Agapanthia (*Epoptes*) *pustulifera*, Sama et al., 2010a: 4, 33 - Syria, Jordan, Israel; Sama et al., 2010b: 180 - "Syrie, Jordanie, Liban (?), Israël"; Löbl & Smetana, 2010: 216 - Jordanian, Israel, Lebanon, Syria; Ali & Rapuzzi, 2016: 267 - Syrian Coastal Region; Cocquempot et al., 2016: 99 - "Jafa", "Batloun (Mont Liban)"; Kasatkin, 2020: 244; Cocquempot et al., 2020: 219 - Syrie: Salkhad (Suweida), Amrit, Hosn, Bilyoun; Danilevsky, 2020: 303 - Jordanian, Israel, Lebanon, Syria.

Agapanthia dahli pustulifera, Lazarev, 2024: 31.

Agapanthia dahli mutinensium, Lazarev, 2024: 31.

Agapanthia dahli subsimplicicornis, Lazarev, 2024: 32.

New material. 1 female, Turkey, Gaziantep, 2 km NWW Fevzipaşa vill., Nurdagi geç., 1100-1140 m, 1.6.2011, A. Napolov & I. Roma - MD.

Distribution. Israel, Syria, Jordan, Lebanon, Turkey (new record).

Note. All three names A. *pustulifera*, *A. mutinensium* and *A. subsimplicicornis* were connected with one variable taxon. Each name was used for specimens from one population. *A. pustulifera* was observed together with "*A. subsimplicicornis"* in Bekaa; and with "*A. mutinensium"* in Batloun. Bisides, according to Cocquempot et al. (2016) *A. pustulifera* from Bekaa was identified by Sama et al. (2010b) as *A. mutinensium.* Specimens of *Agapanthia* mentioned by Cocquempot et al. (2016) were identified by P. Rapuzzi.

21. *Agapanthia* (*Epoptes*) *dahlii setosa* ssp. n.

Figs 6-7

Type locality. Turkey. Isparta, Eğridir environs.

Body black with poor bronze luster; moderately wide; head with dense yellow pubescence, condensed in front of eyes and between antennal bases; genae about as long as lower eye lobes, covered with yellow pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes about equal to the width of 1st antennal joint; frons elongate; antennae relatively thin, protruding beyond elytral apices with 4 joints in males or with 3 - in females; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about ¼ of its length with long and dense setae tuft; 4th antennal joint with several long apical setae; other antennal joints with a few short erect setae apically; male prothorax about as wide basally as long; female prothorax slightly wider basally; pronotum with less wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense yellow pubescence; elytra in males about 3 times longer than wide, in females - about 2.9 times; look glabrous, slightly shining; elytral setae spots indistinct; grey humeral elytral stripe absent, but humeral elytral area with shorter and sparser pubescence; elytral apices rounded, short oblique elytral setae distributed to about elytral middle; ventral body side with moderately dense yellow pubescence: body length in males: 12.8-20.3 mm; width: 3.3-5.1 mm; body length in females: 15.3-20.4 mm; width: 4.0-5.6 mm.

Differencial diagnosis. The new subspecies is similar to *A. d. lateralis* Ganglbauer, 1884 described from "Constantinopel" (Istanbul) because of poor development of elytral pubescence, but body of *A. d. lateralis* is much wider with usually distinct grey lateral elytral stripe. It strongly differs from *A. simplicicornis* Reiter, 1898 (described from Mardin) by presence of antennal setae tufts and light 3rd antennal joint; 3rd joint of anterior tarsus is not elongated. A photo of the lectotype of *A. simplicicornis* Reiter, 1898 similar to *A. boeberi* (Fischer von Waldheim, 1806) was published by (Kasatkin, 2020).

Figs 6-7. *Agapanthia* (*Epoptes*) *dahlii setosa* **ssp. n.**: 6 - Holotype, male, Turkey, Isparta, Eğridir, 6.6.1986, S. Kadlec; 7 - Paratype, female, Antalya, Konakli, 25-29.5.2003, K. Vakson.

Material. Holotype, male, ["*A. lateralis*, det. S. Kadlec"] Turkey, Isparta, Eğridir, 6.6.1986, S. Kadlec - ML; 28 paratypes; male, female ["*A. lateralis*, det. S. Kadlec"] with same label - ML; 2 males, 1 female, Turkey, Antalya, WSW Kemer, 500 m, 4.5.2010, A. Vlasenko - ML, SM; 7 males, 1 female, Turkey, Antalya, Kemer district, Beklibi env., 13-21.5.2008, 36°44'N, 30°33'E, 15-26.5.2010, A.A. Safronov & D.A. Safronov - MD; 1 male, 1 female, "Asia Minor, Lik. Taurus", 5.1861, Dr. Schurmann - MD; 1 male, Turkey, Isparta, W Kizilkaya, 25.4.1996, S. Kadlec - MD; 1 male, 3 female, Turkey, Antalya, Seki near Manavgat, 21.5.1996, W. Grosser - MD; 1 male, 1 female, Antalya, Konakli, 25-29.5.2003, K. Vakson - MD; 1 female, Turkey, Içel, NW Erdemli, Aydinlar, 28.5.2001, P. Bialooki - MD; 1 male, 2 females, Turkey, Adana, Hasanbeyli env. pass, 37°07'N, 36°34', 19-25.05.2001, P. Bialooki - MD; 1 female, Hasanbeyli env., N Amanus Mts. 21.5.2001, P. Bialooki - MD; 1 female, Turkey, Buglan geçidi, NW Mus, 17.6.2003, P. Bialooki - MD.
Distribution. Sothern Turkey in several provinces: Antalya, Isparta, Içel, Adana and Mus.

22. *Agapanthia* (*Epoptes*) *dahlii grossicornis* ssp. n.

Figs 8-9

Type locality. Turkey, Çorum.

Body black with poor bronze luster; moderately wide; head with dense yellow pubescence, condensed in front of eyes and between antennal bases; genae about as long as lower eye lobes, covered with yellow pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes about equal to the width of 1st antennal joint; frons elongate; antennae distinctly thicker than in *A. d. setosa*, protruding beyond elytral apices with 4 joints in males or with 3 - in females; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about ¼ of its length; with long and dense setae tuft,; 4th antennal joint without setae tuft, with several long apical setae; other antennal joints with a few short erect setae apically; male prothorax about as wide basally as long; female prothorax slightly wider basally;

Figs 8-9. *Agapanthia* (*Epoptes*) *dahlii grossicornis* **ssp. n.**: 8 - Holotype, male, Turkey, Çorum, 18.6.1994, N. Auvray; 9 - Paratype, female with same label.

pronotum with less wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense yellow pubescence; elytra in males about 3 times longer than wide, in females - about 2.9 times; look glabrous, slightly shining; elytral setae spots indistinct; grey humeral elytral stripe hardly visible, humeral elytral area with very short and sparse pubescence; elytral apices rounded, short oblique elytral setae distributed to about elytral middle; ventral body side with moderately dense yellow pubescence: body length in males: 15.1-16.5 mm; width: 4.1-4.4 mm; body length in female: 16.5 mm; width: 4.4 mm.

Differencial diagnosis. The new subspecies is similar to *A. d. setosa*, but differs by rather thick antennae and grey humeral elytral stripe hardly visible; besides it has well developed setae tufts of 3rd antennal joint, doesn't have setae tufts of 4th antennal joints.

Material. Holotype, male, Turkey, Çorum, 18.6.1994, N. Auvray - ML; 4 paratypes; 2 males, 1 female, with same label - ML, SM; 1 male, Turkey, Amasya, Yenice, 500 m, 21.5.2000, D. Obydov - MD.

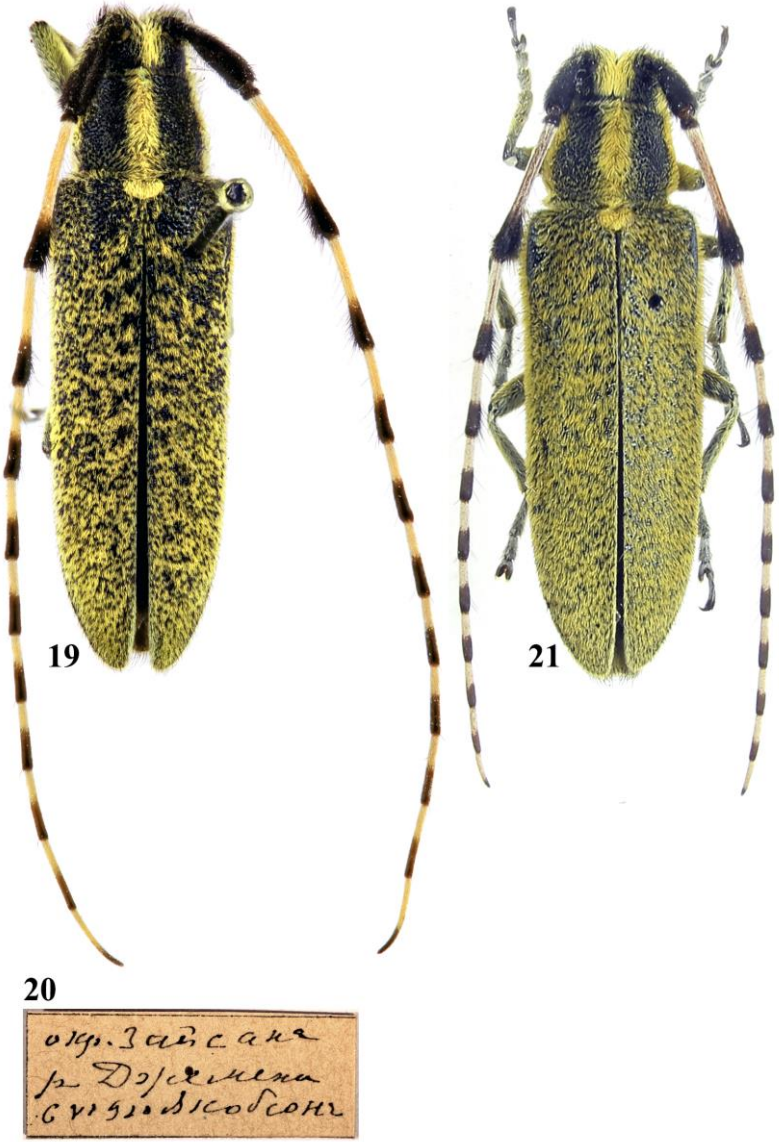
Distribution. Northern Turkey, Çorum and Amasya provinces.

27. *Agapanthia* (*Epoptes*) *dahlii zaysanensis* ssp. n.

Figs 19-21

Type locality. East Kazakhstan, Zaysan Lake environs, Zhemeney River.

Body black, elytra without bronze luster; moderately wide; head with dense yellow pubescence, whitish setae are condensed in front of eyes; genae about as long as lower eye lobes, covered with yellow and white pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes less than the width of 1st antennal joint; frons a little longer than as wide; antennae rather thin, protruding beyond elytral apices with 2-4 joints; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about ⅓ of its length; with very dense flattened tuft of short black setae; 4th, 5th with similar setae tufts, but considerably reduced; others antennal joints with a few long apical setae; prothorax rather widened basally; pronotum with wide, dense and bright yellow central stripe;



Figs 19-21. *Agapanthia* (*Epoptes*) *dahlii zaysanensis* **ssp. n.**: 19 - Holotype, male, East Kazakhstan, Zaysan Lake environs, Zhemeney River, 6.6.1910, A. Jacobson; 20 - Holotype label; 21 - Paratype, East Kazakhstan, Zaysan Lake environs, Dzhemeney River, 31.5.1910, A. Jacobson.

scutellum semicircular, covered with dense yellow pubescence; elytra about 2.8 times longer than wide, densely pubescent, often with fused setae patches; grey humeral elytral stripe absent; elytral apices rounded, short oblique elytral setae very short poorly visible along basal third; ventral body side with very dense yellow pubescence: body length in males: 16.0-16.1 mm, width: 3.5-4.0 mm, body length in females: 16.0-18.0 mm; body width: 4.0-4.8 mm.

Differencial diagnosis. The new subspecies is characterized by realtively short antennae, surpassing elytral apex in males with 2-4 joints; setae tufts are distinct on 3rd - 5th antennal joints; seta tufts of 3rd joints very dense, consisting of short setae, protruding all along whole black joint apex.

Material. Holotype, male, East Kazakhstan, Zaysan Lake environs, Zhemeney River, 6.6.1910, A. Jacobson - ZIN; 5 paratypes, 1 male, 2 females East Kazakhstan, Zaysan Lake environs, Dzhemeney River, 31.5.1910, A. Jacobson - ZIN; 2 females with same label - ZMM.

Distribution. East Kazakhstan, Zaysan Lake environs, Zhemeney River.

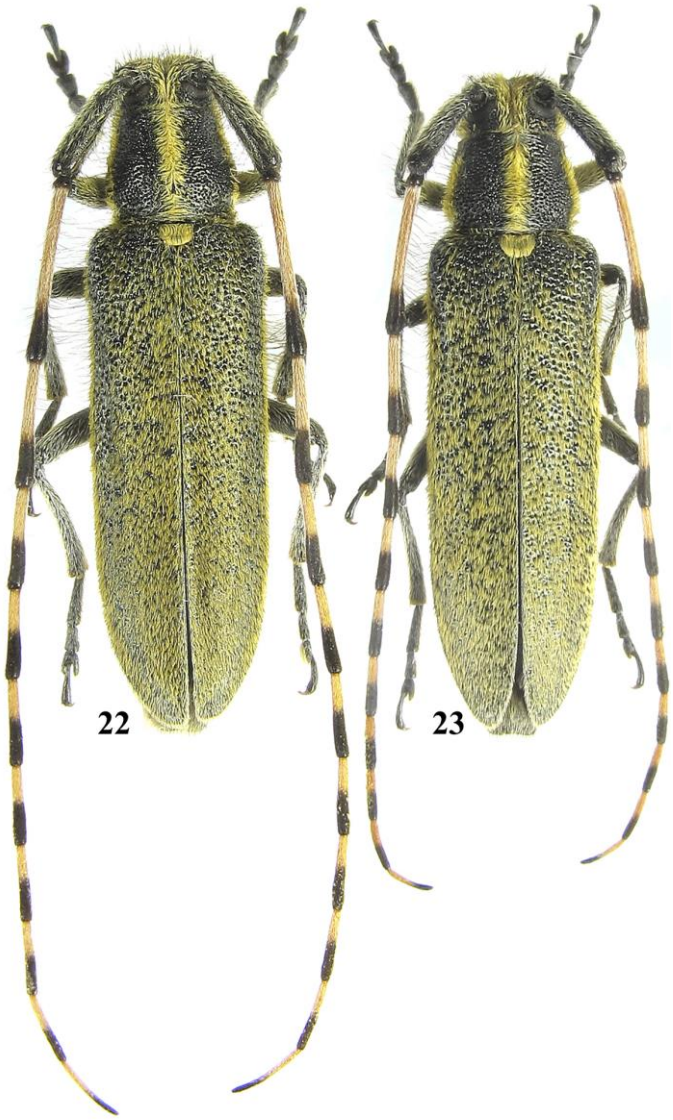
Etymology. The name of the new taxon is derived from the large lake Zaysan located near the type locality.

28. *Agapanthia* (*Epoptes*) *dahlii zhidkovi* ssp. n.

Figs 22-23

Type locality. Kazakhstan, eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E.

Body black, elytra without bronze luster; moderately wide; head with dense yellow pubescence, whitish setae are condensed in front of eyes; genae about as long as lower eye lobes, covered with yellow and white pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes less than the width of 1st antennal joint; frons about as long as wide; antennae rather thin, protruding beyond elytral apices with 5 joints in males or with 3 - in females; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about ¼ of its length;



Figs 22-23. *Agapanthia* (*Epoptes*) *dahlii zhidkovi* **ssp. n.**: 22 - Holotype, male, Kazakhstan, eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E, ex pupa, from *Eremurus*, 9.5.2017, A. Abramov; 23 - Paratypes, female with same label.

with several long apical setae without dense setae tuft; 4th, 5th and others antennal joints with a few long setae; male prothorax about as wide basally as long a little widened basally; female prothorax more widened basally; pronotum with wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense yellow pubescence; elytra in males about 3 times longer than wide, in females - about 2.8 times; densely pubescent, with hardly distinct setae spots; grey humeral elytral stripe absent; elytral apices rounded, short oblique elytral setae very short poorly visible to about apical elytral third; ventral body side with moderately dense yellow pubescence: body length in males: 13.6-14.3 mm; width: 3.4-3.5 mm; body length in females: 14.4-17.4 mm; width: 3.5-3.8 mm.

Differencial diagnosis. The new subspecies is characterized by the absence of setae tufts of 3rd antennal jonts, while elytra densely pubescent with conjugated elytral setae patches; grey lateral elytral stripe absent.

Material. Holotype, male, Kazakhstan, eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E, ex pupa, from *Eremurus*, 9.5.2017, A. Abramov - MD; 9 paratypes; 3 males, 4 females with same label - MD; 1 male, 1 female with same label - ML.

Distribution. East Kazakhstan, eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E.

Etymology. The new subspecies is dedicated to Mikhail Borisovich Zhidkov - a friend of Andrey Evgenievich Abramov, who accompanied him in his expedition.

30. *Agapanthia* (*Epoptes*) *dahlii vishnyakovi* ssp. n.

Figs 24-25

Type locality. Uzbekistan, Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve (about 39°10'30"N, 67°18'43"E).

Body black with numerous erect black setae; moderately wide; head with moderately dense yellow pubescence, condensed in front of eyes and between antennal bases; genae about as long as lower eye lobes, covered with yellow pubescence; eyes a little

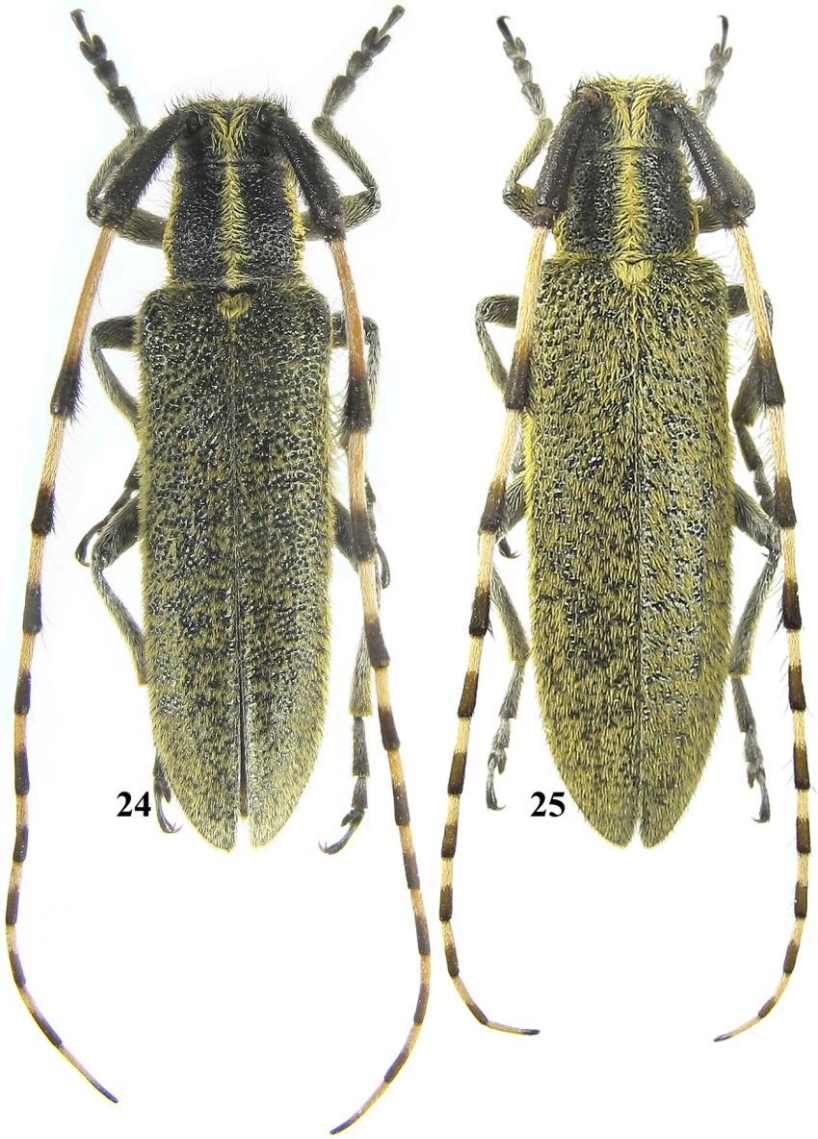
convex, about flat, with deep emargination; the distance between upper eye lobes about equal to the width of 1st antennal joint; frons elongate; antennae relatively thick, protruding beyond elytral apices with 5 joints in males or with 3 - in females; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about ¼ of its length; with distinct setae tuft, consisting of several dense short setae; 4th antennal joint with less developed setae tuft, but 5th joint also has setae tuft, but strongly reduced; other antennal joints with a few short erect setae apically; prothorax moderately widened posteriorly, in males about as long as basal width, in females a little wider posteriorly; pronotum with less wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense yellow pubescence; elytra in males about 3.1 times longer than wide, in females - about 2.6 times; with moderately dense yellow pubescence; many small elytral areas are nearly glabrous; elytral setae spots more or less distinct; grey humeral elytral stripe absent; elytral apices rounded, erect elytral setae distributed to about elytral middle; ventral body side with very dense and regular yellow pubescence: body length in males: 12.4-14.4 mm; width: 2.9-3.5 mm; body length in females: 15.5-16.3 mm; width: 4.3-4.4 mm.

Differencial diagnosis. The new taxon is close to *A. d. zaysanensis* **ssp. n.,** but differs with dark-grey elytra with scattered pubescence; pronotal setae stripe rather narrow; antennae rather long, surpassing elytral apices in males with 5 joints.

Material. Holotype, male, Uzbekistan, Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve, 6.6.2010 - MD; 6 paratypes; 2 males, 2 females with same label - MD; 1 male with same label - ML; 1 female from same locality, 1.5.2010 - MD.

Distribution. Uzbekistan, Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve (about 39°10'30"N, 67°18'43"E).

Etymology. The new taxon is dedicated to my good friend Alexey Nikolaevich Vishnyakov.



Figs 24-25. *Agapanthia* (*Epoptes*) *dahlii vishnyakovi* **ssp. n.**: 24 - Holotype, male, Uzbekistan, Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve, 6.6.2010; 25 - female with same label.

31. *Agapanthia* (*Epoptes*) *dahlii krivosheinae* ssp. n.

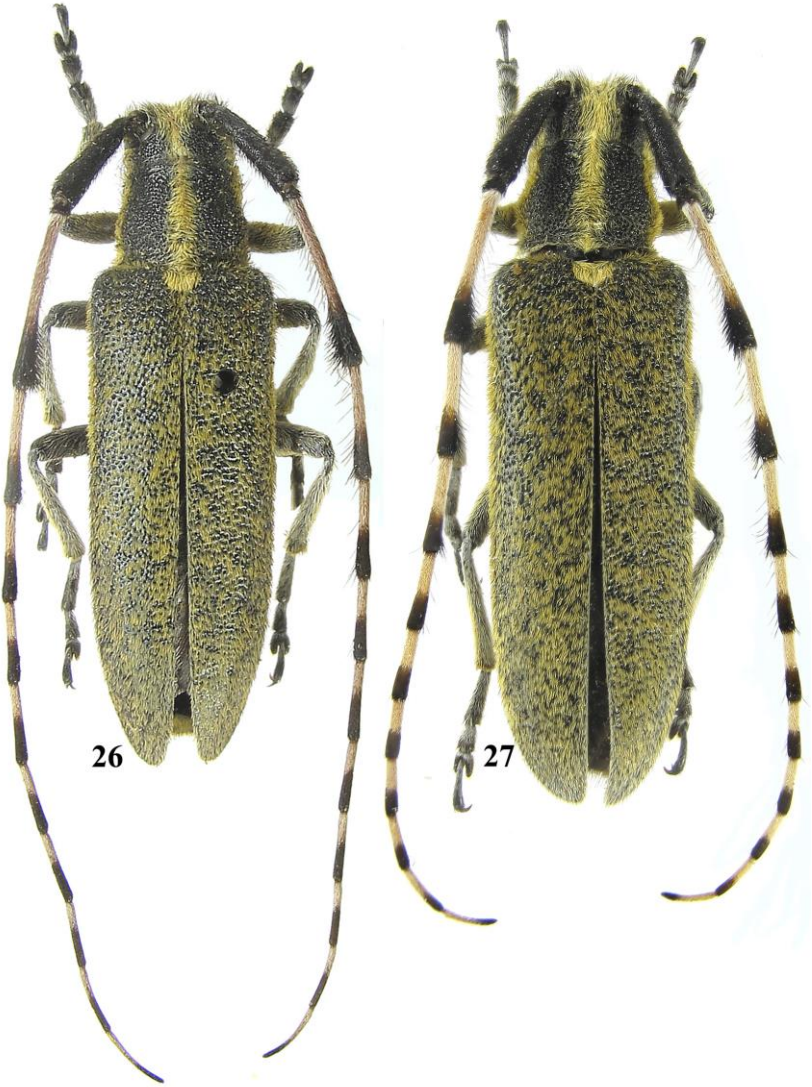
Figs 26-27

Type locality. Uzbekistan, Syrdarya Region, Yangier.

Two males (one - exceptionally small) and a female available; body black, moderately wide; head with dense yellow pubescence, condensed along frons and between antennal bases, rather pale in front of eyes; genae a little longer than lower eye lobes, covered with yellow pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes about equal to the width of 1st antennal joint; frons elongate; antennae relatively thin, protruding beyond elytral apices in big male with 5 joints, in female - with 3 joints; 3rd joint black for about 1/3 of its length and here with long and dens setae tuft; 4th - 5th antennal joints with considerably reduced setae tufts; prothorax strongly widened posteriorly, much wider than long; pronotum with wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense yellow pubescence; elytra in big male about 2.8 times longer than wide, in female - in about 2.5 times; with very dense pubescence, aggregated in numerous small setae spots; small glabrous elytral areas nearly indistinct grey humeral elytral stripes absent; erect elytral setae in big specimens very short and hardly distinct; elytral apices rounded; ventral body side with very less dense yellow pubescence than in other subspecies; body length in males: 10.1-17.9 mm, width: 2.3-4.7 mm; body length in female: 19.2 mm, width: 5.4 mm.

Exceptionally small male has several own characters: antennae just a little longer than body protruding beyond elytral apices with 4 joints; prothorax slightly diverging posteriorly, nearly cylindrical; elytra with distinct long erect, shortly sharpened apically.

Differencial diagnosis. The new taxon is characterized by very long antennae, surpassing elytral apices in males with 5 joints; elytral pubescence very dence, with hardly pronounced setae patches, without grey humeral stripes.



Figs 26-27. *Agapanthia* (*Epoptes*) *dahlii krivosheinae* **ssp. n.**: 26 - Holotype, male, Uzbekistan, Syrdarya Region, Yangier, 9.5.1980, M. Krivosheina; 27 - Paratypes, female, Uzbekistan, Chatkal Natural Reserve, 22.5.1989, A. Kompatzev.

Material. Holotype, male, Uzbekistan, Syrdarya Region, Yangier, 9.5.1980, M. Krivosheina - ML; 2 paratypes; 1 male, USSR, Uzbekistan, near Syrdarya Station, junction No. 122, 1.5.1931 - ML; 1 female, Uzbekistan, Chatkal Natural Reserve, 22.5.1989, A. Kompatzev - MD.
Distribution. Uzbekistan: Syrdarya Region (Yangier and Syrdarya Station) and Chatkal Natural Reserve.
Etymology. The new taxon is dedicated to doctor of biology sciences Marina Gennadievna Krivosheina, who collected the holotype.

32. *Agapanthia* (*Epoptes*) *dahlii revadensis* ssp. n.

Fig 28

Type locality. Tadzhikistan, Zerafshan valley, Revad environs.

Only one female available; body black with numerous erect black setae; rather wide; head with dense yellow pubescence, condensed in front of eyes and between antennal bases; genae about as long as lower eye lobes, densely covered with yellow pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes is about 2 mm; frons slightly elongate; antennae moderately thick, protruding beyond elytral apices with 3 joints; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about ¼ of its length; with distinct setae tuft, consisting of several dense short setae; 4th and 5th antennal joints with a few short erect setae; prothorax moderately widened posteriorly, a little wider than long; pronotum with very wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense and bright yellow pubescence; elytra about 2.8 times longer than wide; with very dense bright yellow continuous pubescence; very small areas with sparse pubescence rather numerous, but elytral spots nearly indistinct; grey humeral elytral stripe absent; elytral apices shortly sharpened; erect elytral setae distributed to about elytral middle; ventral body side with very dense and regular yellow pubescence: body length 20.2 mm; width: 5.2 mm.
Differencial diagnosis. The subspecies is characterized by very bright orange elytral pubescence; elytral setae patches partly fused; setae tuft of 3rd antennal joint pooly developed; 4th and 5th antennal joints with a few short apical erect setae.

Fig. 28. *Agapanthia* (*Epoptes*) *dahlii revadensis* **ssp. n.**: Holotype, female, Tadzhikistan, Zerafshan valley, Revad environs, 9.6.1994, V. Lukhtanov.

Distribution. A single known locality - Revad (39°23′N 68°11′E) environs in Zerafshan River valley of north-west Tadzhikistan.
Material. Holotype, female, Tadzhikistan, Zerafshan valley, Revad environs, 9.6.1994, V. Lukhtanov - MD.
Etymology. The name of the new taxon comes from the name of the type locality.

A key to the subspecies of *Agapanthia* (*Epoptes*) *dahlii* (C.F.W. Richter, 1820)

1(36) 4th antennal joint with reduced setae tuft.
2(29) Setae tuft of 3rd antennal joint well developed.
3(18) Elytra with dense and bright pubescence.
4(13) Elytral setae spots very contrast.
5(6) Grey humeral elytral stripe usually well developed; body length: 11.3-20.5 mm. Southwest Azerbaijan, South of Armenia, Iran (East Azerbaijan province).

8. *A. d. rubenyani* Lazarev, 2013

6(5) Grey humeral elytral stripe absent.
7(8) Prothorax a little widened basally; about 1.2 times wider posteriorly than anteriorly; elytral setae spots usually separated; elytral apices distinctly pointed; pronotal setae stripe wide; body length: 9.5-19.5 mm Turkmenistan, Kopetdag (near Ashgabat, Firyuza, Kara-Kala, Ay-Dere) and border regions of Iran.

14. *A. d. transcaspica* Pic, 1900

8(7) Prothorax strongly widened basally, about 1.4 times wider posteriorly, than anteriorly
9(12) Elytral pubescence distinctly spotted.
10(11) Setae tufts of 3rd antennal joint well develop; body length: 9.0-22.0 mm. Europe (Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, ?Belarus, Croatia, Russia (Central European Territory and South European Territory), Czech Republic, France (including Corsica and Monaco), Germany, Hungary, Kazakhstan, Macedonia, Moldova, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, Spain (including Gibraltar), ?Switzerland, Ukraine), Asia (Georgia, Kazakhstan).

1. *A. d. dahlii* (Richter, 1820)

11(10) Setae tufts of 3rd antennal joint considerably reduced, represented by several dense long setae; body length: 8.0-16.0 mm. Turkey.

20. *A. d. kindermanni* Pic, 1905

12(9) Elytral pubescence about uniform with hardly developed setae spots; body length: 14.0-22.0 mm. Kyrgyzstan, Kazakhstan.

24. *A. d. alexandris* Pic, 1901

13(4) Elytral spots conjugated.

14(17) 3rd antennal joint with numerous black oblique setae; elytral pubescence less uniform with numerous small glabrous spots.

15(16) Elytra with orange pubescence; frons with several black oblique setae; body length: 20.2 mm. Tadjhikistan (Zerafshan valley, Revad environs).

32. *A. d. revadensis* **ssp. n.**

16(15) Elytra with yellow pubescence; frons with several black erect setae; body length: 14,9-19,6 mm. West Siberia of Russia: Novosibirsk Region, Altay Republic, Kemerovo Region, Khakassia Republic.

3. *A. d. efimovi* Danilevsky, 2021

17(14) 3rd antennal joint without black oblique setae; elytral pubescence more or less uniform with several small glabrous spots; body length: 13.0-22.5 mm. West Siberia of Russia: Kurgan Region, Tomsk Region.

2. *A. d. kuleshovi* Danilevsky, 2018

18(3) Elytra poorly pubescent.

19(20) Antenna relatively thick; body length: 15.1-16.5 mm. Northern Turkey (Çorum Provinces, Amasya Provinces.

22. *A. d. grossicornis* **ssp. n.**

20(19) Antenna relatively thin.

21(22) Black parts of 3rd antennal joint much longer, covers about 1/3 of its length; body length: 15.8-18.0 mm. Tajikistan (North-Western Pamir), Afghanistan (Badakhshān province).

33. *A. d. ustinovi* Danilevsky, 2013

22(21) Black parts of 3rd antennal joint much shorte, covers about 1/4 of its length or shorter.

23(24) Elytral pubescence with strongly scattered patches; body length: 10.0-22.0 mm. Italy (Sicilia).

15. *A. d. sicula* Ganglbauer, 1884

24(23) Elytral pubescence rather uniform.

25(26) Elytral pubescence nearly indistinct; body length: 10.0-23.0 mm. Albania (Vlorë County, Delvinë District, Kardhiqit Mts., 39°59'36.28"N, 20°06'10.24"E), Bulgaria, Greece, Macedonia.

16. *A. d. schurmanni* Sama, 1979

26(25) Elytral pubescence very short but distinct.

27(28) Humeral elytral area with shorter and sparser pubescence; body length: 12.8-20.4 mm. Sothern Turkey (Antalya Province, Isparta Province, Içel Province, Adana Province, Mus Province).

21. *A. d. setosa* **ssp. n.**

28(27) Humeral elytral area with same pubescence as dorsal elytral side; body length: 10.0-18.0 mm. Southern Kyrgyzstan, Uzbekistan (Iordan, about 39°56'N, 71°45'E, 2300 m), Tajikistan (Indications by Kadyrov (1989) on *A. muellneri* - Darvoz Range, Zigar, Viskharv).

26. *A. d. alaiensis* Kratochvíl, 1985

29(2) Setae tuft of 3rd antennal joint reduced (several type specimens of *A. d. calculensis* including holotype have distinct setae tufts).

30(31) Elytra with grey humeral stripe; body length: 12.0-24.0 mm. Turkey.

18. *A. d. lateralis* Ganglbauer, 1884

31(30) Elytra without grey humeral stripe, usually with well-developed pubescence.

32(33) Elytral pubescence less developed; prothorax rather widened posteriorly; body length: 11.4-17.9 mm. North-Eastern Kazakhstan.

5. *A. d. calculensis* Lazarev, 2013

33(32) Elytral pubescence well developed.

34(35) Elytral setae tufts diffused, partly conjgated; body length: 13.6-17.4 mm. East Kazakhstan (eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E).

28. *A. d. zhidkovi* **ssp. n.**

35(34) Elytral setae tufts rather contrast with glabrous spaces in between.

13. *A. d. salviae* Holzschuh, 1975

36(1) 4th antennal joint with well-developed setae tuft.

37(46) Elytral pubescence poorly developed; elytra look dark and shining.
38(39) Elytral look totally glabrous, elytral pubescence usually indistinct; body length: 13,5-16.5 mm. East Azerbaijan (Zarat on the Caspian coast; based on a specimen from the collection of C. Holzschuh with his definitions), Eastern Georgia.

7. *A. d. nitidipennis* Holzschuh, 1984

39(38) Elytra with slightly visible pubescence.
40(41) Antennae dark, basal part of 3rd antennal joint greysh; body length: 14.0-23.2 mm. Northern Iran (Mazandaran Province).

10. *A. d. persica* Semenov, 1893

41(40) Antenna light, basal part of 3rd antennal joint reddish.
42(43) Apical setae tuft of 4th antennal joint poorly developed with about 9 long setae only; body length: 12.5-19.8 mm. Kyrgyzstan, Uzbekistan, ?China (Xinjiang).

25. *A. d. muellneri* Reitter, 1898

43(42) Apical setae tuft of 4th antennal joint well with numerous long setae.
44(45) Elytral punctation very dense, many dots conjugated; elytra nearly glabrous, elytral pubescence often indistinct; body length: 13.0-19.0 mm. Jordan, Israel, Lebanon, Syria.

19. *A. d. pustulifera* Pic, 1905

45(44) Elytral punctation much sparser, dots never conjugated; elytra with distinct pubescence; body length: 14.0-21.0 mm. Northern Iran (Golestan Province).

12. *A. d. golestanica* Lazarev, Plewa & Jaworski, 2016

46(37) Elytral pubescence well developed; elytra look yellow.
47(58) Prothorax a little widened basally; about 1.2 times wider posteriorly than anteriorly, or sometimes about equally in wide.
48(51) Antennae short, male antennae protruding beyond elytral apex with 4 joints or about one third of elytral length.
49(50) Elytra yellow with very dense pubescence; pronotal setae stripe very wide; body length: 16.0-18.0 mm. East Kazakhstan (Zaysan Lake environs, Zhemeney River).

27. *A. d. zaysanensis* **ssp. n.**

50(49) Elytra dark-grey, with scattered pubescence; pronotal setae stripe rather narrow; body length: 12.4-16.3 mm. Uzbekistan

(Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve (about 39°10'30"N, 67°18'43"E)).

30. *A. d. vishnyakovi* **ssp. n.**

51(48) Male antennae very long, protruding beyond elytral apex with 5 joints about half of elytral length.

52(53) Pronotal setae stripe rather narrow; body length: 14.0-19.7 mm. Kazakhstan (Southern environs of Lake Sorbulak, 43°33'57.65"N, 76°36'24.93"E; Ili River Valley (Dobun pier)).

23. *A. d. iliensis* Danilevsky, 2018

53(52) Pronotal setae stripe rather wide.

54(55) Elytral spots concentrated in transverse rows; body length: 13.1-17.2 mm. Russia (Dagestan), North-Eastern Azerbaijan (Altıağac).

9. *A. d. ismailovae* Lazarev, 2013

55(54) Elytral spots are randomly located.

56(57) Grey humeral elytral stripe rather distinct; body length: 17.0-17.7 mm. Azerbaijan (Jalal-Abad District), ?Iran.

11. *A. d. lenkorana* Lazarev, Plewa & Jaworski, 2016

57(56) Grey humeral elytral stripe absent; body length: 10.1-19,2 mm. Uzbekistan (Syrdarya Region (Yangier and Syrdarya Station) and Chatkal Natural Reserve).

31. *A. d. krivosheinae* **ssp. n**.

58(47) Prothorax strongly widened basally, about 1.4 times wider posteriorly, than anteriorly

59(60) Elytra strongly spotted with very distinct contrast bright yellow setae spots; body length: 10.5-20.0 mm. Azerbaijan, Armenia, Georgia, Iran, Turkey.

6. *A. d. walteri* Reitter, 1898

60(59) Elytral setae spots less distinct, does not look spotted.

61(62) Elytral spots more or less separated; body length: 10.0-22.0 mm. France (Corse), Italy.

17. *A. d. malmerendii* Sama, 1981

62(61) Most of elytral spots conjugated.

63(64) Antennal setae tuft smaller and shorter; body length: 14.4 mm. Russia (Republic of Altay, Chemal environs).

4. *A. d. chemalensis* **ssp. n.**

64(63) Antennal setae tuft long and large; body length: 15.3-17.6 mm. Kazakhstan (Lepsy River), ?China (Xinjiang).

29. *A. d. lepsyensis* Danilevsky, 2018

Map. 1. Typical localities of *Agapanthia dahlii* (Richter, 1821) subspecies.

Map 1. Typical localities of *Agapanthia dahlii* (Richter, 1821) subspecies.

1. *A. d. dahlii* (Richter, 1820): "Hungaria"; **2. *A. d. kuleshovi* Danilevsky, 2018**: Russia, Tomsk Region, Belousovo environs, 56°18'13"N, 85°11'53"E; **3. *A. d. efimovi* Danilevsky, 2021**: Russia, Kemerovo Region, Prokopyevsk District, Karakan Mt. Ridge., 6-7 km from Tykhta; **4. *A. d. chemalensis* ssp. n.**: Russia, Republic of Altay, Chemal; **5. *A. d. calculensis* Lazarev, 2013**: North-east Kazakhstan, the valley of the Sibinka River about 40 km south of Ust-Kamenogorsk, 49°40'27.56"N, 82°39'13.12"E; **6. *A. d. walteri* Reitter, 1898**: Turkey, Erzurum; **7. *A. d. nitidipennis* Holzschuh, 1984**: Georgia, environs of the Jvari monastery (41°50′19″N, 44°44′02″E) north of Tbilisi; **8. *A. d. rubenyani* Lazarev, 2013**: South Armenia, Megri District, mountains above Shvanidzor, 39°13'N, 46°22'44"E, 1600 m; **9. *A. d. ismailovae* Lazarev, 2013**: Russia, North Cucasus, Dagestan, Rutul environs (41°32'N, 47°25'E); **10. *A. d. persica* Semenov, 1893**: Iran, Eastern and Central Mazanderan province; **11. *A. d. lenkorana* Lazarev, Plewa & Jaworski, 2016**: Azerbaijan, Jalal-Abad District, Andreevka environs (Karazenjir, 39°16'N, 48°30'E, 10 m); **12. *A. d. golestanica* Lazarev, Plewa & Jaworski, 2016**: Iran, Golestan province, 60 km east Minudasht, 460 m, 37°21'36"N 55°55'48"E; **13. *A. d. salviae* Holzschuh, 1975**: Iran, Elburz, south side, 10 km north of Karaj; **14. *A. d. transcaspica* Pic, 1900**: Turkmenistan, Ashgabat; **15. *A. d. sicula* Ganglbauer, 1884**: Italy, Sicilia; **16. *A. d. schurmanni* Sama, 1979**: Greece, Kastoria; **17. *A. d. malmerendii* Sama, 1981**: Italia, Romagna, Portico di Romagna [44°1'N, 11°46'E]; **18. *A. d. lateralis* Ganglbauer, 1884**: Turkey, Istanbul Province, Istanbul (Constantinopel); **19. *A. d. pustulifera* Pic, 1905**: Israel, Jerusalem; **20. *A. d. kindermanni* Pic, 1905**: Southern Turkey; **21. *A. d. setosa* ssp. n.**: Turkey. Isparta, Eğridir environs; **22. *A. d. grossicornis* ssp. n.**: Turkey, Çorum; **23. *A. d. iliensis* Danilevsky, 2018**: Kazakhstan, Almaty Region, southern environs of Lake Sorbulak (43°33'57.65"N, 76°36'24.93"E), 670 m; **24. *A. d. alexandris* Pic, 1901**: Kyrgyzstan, Kyrgyz Ridge (formerly Alexander Ridge); the type most likely comes from the western (Kazakh) part of the ridge; **25. *A. d. muellneri* Reitter, 1898**: Uzbekistan, Tashkent; **26. *A. d. alaiensis* Kratochvíl, 1985**: Southern Kyrgyzstan at the southern border of the

Fergana Valley, Kadamjai (40°7'44"N, 71°43'26"E); **27. *A. d. zaysanensis* ssp. n.**: East Kazakhstan, Zaysan Lake environs, Zhemeney River; **28. *A. d. zhidkovi* ssp. n.**: Kazakhstan, eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E; **29. *A. d. lepsyensis* Danilevsky, 2018**: Kazakhstan, Lepsy river, 7 km northeast Koilyk (formerly Antonovka), 45°41'36.22"N, 80°17'58.94"E; **30. *A. d. vishnyakovi* ssp. n.**: Uzbekistan, Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve (about 39°10'30"N, 67°18'43"E); **31. *A. d. krivosheinae* ssp. n.**: Uzbekistan, Syrdarya Region, Yangier; **32. *A. d. revadensis* ssp. n.**: Tadzhikistan, Zerafshan valley, Revad environs; **33. *A. d. ustinovi* Danilevsky, 2013**: Tadzhikistan, Pamir, Poshkharv environs [38°24'1"N, 71°9'18"E].

Acknowledgements. I am very grateful for all my friends and colleagues who supplied me with necessary data and materials: Andrey Abramov (Krasnodar Region, Russia), Mikhail Danilevsky (A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow, Russia), Russia), Dmitry Efimov (Kemerovo, Russia), Aleksey Gusakov (Zoological Museum of Moscow State University, Karel Hodek (Brno, Czech Republic), Michal Holomčík (Lužice, Czech Republic), Sergey Murzin (Moscow, Russia), David Navrátil (Litomyšl, Czech Republic), Gérard Tavakilian (Muséum National d'Histoire Naturelle, Paris, France), Vadim Ustinov (Moscow, Russia). Rostislav Filimonov (Saint-Petersburg, Russia) and Ivan Chigray (Zoological Institute of the Russian Academy of Sciences, Saint-Petersburg, Russia) were responsible for the arrangement of certain photos. Boris Korotyaev (Zoological Institute of the Russian Academy of Sciences, Saint-Petersburg, Russia) is hearty gratitude for his kind assistance.

REFERENCES

Abai M. 1969. List of Cerambycidae family in Iran. - Entomologie et Phytopatologie appliquees. 28: 47-54.

Adlbauer K. 1988. Neues zur Taxonomie und Faunistik der Bockkäferfauna der Türkei (Coleoptera, Cerambycidae). - Entomofauna. Zeitschrift für Entomologie. 9 (12): 257-297.

Alexandrovitch O.R., Lopatin U.K., Pisanenko A.D., Tsinkevitch V.A. & Snitko S.M., 1996. A catalogue of Coleoptera (Insecta) of Belarus. Minsk: 103 pp.

Ali K. & Rapuzzi P. 2016. Second contribution to the knowledge of Longhorn Beetles of the Syrian Coastal Region (Coleoptera Cerambycidae). -

Biodiversity Journal. 7 (2): 261-272.
Althoff J. & Danilevsky M.L. 1997. A check-list of Longicorn beetles (Coleoptera, Cerambycoidea) of Europe. Slovensko Entomolosko Drustvo Stefana Michielija. Ljubljana. 64 pp.
Aurivillius C. 1923. Cerambycidae: Lamiinae. II. Coleopterorum Catalogus pars 74 [Vol. 23] II: 323-704. W. Junk & S. Schenkling, Berlin.
Barimani Varandi H., Kalashian M.Yu. & Barari H. 2010. Contribution to the knowledge of the longhorn beetles (Coleoptera, Cerambycidae) fauna of Mazandaran province, Iran. - Euroasian Entomological Journal. 9 (1): 50-54.
Bartenev A.F. 2004. A review of the long-horned beetles species (Coleoptera: Cerambycidae) of the fauna of Ukraine. - Izvestiya Kharkovskogo Entomologicheskogo Obshchestva [The Kharkov Entomological Society Gazette. 2003 (2004). 11 (1-2): 24-43. [in Russian]
Bartenev A.F. & Terekhova V.V. 2011. An addition and remarks to the fauna of cerambycid beetles (Coleoptera, Cerambycidae) of Left-bank Ukraine and Crimea. - The Journal of V.N. Karazin Kharkiv National University. Series: biology. 13 (947): 133-146.
Bense U. 1995. Longhorn beetles. Illustrated key to the Cerambycidae and Vesperidae of Europe. Weikersheim. 512 pp.
Breuning S. 1961. 4. Lieferung, pp: 183-284. In: S. Breuning, 1958-1969. Catalogue des Lamiaires du Monde (Col. Céramb.). Tutzing bei München, Verlag des Museums G. Frey. 1069 pp.
Brustel H., Berger P. & Cocquempot C. 2003. Catalogue des Vesperidae et des Cerambycidae de la faune de France (Coleoptera). - Annales de la Société Entomologique de France, Paris (N. S.). 38 (4) (2002): 443-461.
Carrière J. 1996. A propos d'Agapanthiini: note biologique complémentaire. (Coleoptera, Cerambycidae). - Lambillionea. 96 (3) 2: 561-570.
Carrière J. 1996b. Oviposition et stade post-embryonnaire d'Agapanthiini : à propos d'Agapanthia asphodeli (Latreille, 1804) et d'Agapanthia dahli (Richter, 1821) en région héraultaise, généraliés, aspect iconographique (Coleoptera, Cerambycidae). - Lambillionea. 96 (1) 1: 109-121.
Chernyshev [Chernyshov] A.P. 1930. List of beetles b. Kaluga province, Pp. 5-16.- In the book: Fauna of insects b. Kaluga province. Vol. 2. Kaluga: Kaluga plant protection station. 26 p. [in Russian]
Cocquempot C., Nemer N., Brustel H. & Tanios C. 2016. Nouvelles données et nouveau catalogue des Coléoptères Cerambycidae du Liban (Coleoptera, Cerambycoidea). - Bulletin de la Société Entomologique de France, Paris. 121 (1): 91-104.
Cocquempot C., Weill P. & Kabátek P. 2020. Contribution à la connaissance des Coléoptères Cerambycidae de Syrie (Coleoptera). - Revue de l'Association Roussillonnaise d'Entomologie (R.A.R.E.). 29 (3): 215-224.
Csiki E. 1905. Magyorország Cerambycidái. XIX. - Rovartani Lapok, Budapest. 12 (3): 61-64.
Danilevsky M.L. & Miroshnikov A.I. 1985. Timber-Beetles of Caucasus (Coleoptera, Cerambycidae). Key. Krasnodar: 419 pp. [in Russian]
Danilevsky M.L. 1993. Taxonomic and zoogeographic notes on the family

Cerambycidae (Coleoptera) of Russia and adjacent regions. - Russian Entomologicasl Journal. 1 [1992]: 37-39.

Danilevsky M.L. 2006. A Checklist of the Longicorn-Beetles (Coleoptera, Cerambycidae) of Moscow Region. - Russian Entomological Journal. 15 (2005) (1): 43-51.

Danilevsky M.L. 2012. Additions and corrections to the new Catalogue of Palaearctic Cerambycidae (Coleoptera) edited by I. Löbl and A. Smetana, 2010. Part. III. - Munis Entomology & Zoology. 7 (1): 109-173.

Danilevsky M.L. 2014. Additions and corrections to the new Catalogue of Palaearctic Cerambycidae (Coleoptera) edited by I. Löbl and A. Smetana, 2010. Part. IX. - Humanity space. International almanac. 3 (2): 193-250.

Danilevsky M.L. 2017. Three new Agapanthia Audinet-Serville, 1835 (Coleoptera, Cerambycidae) from Russia, Central Asia and Kazakhstan. Humanity space. International almanac. 6 (1): 24-32.

Danilevsky M.L. 2018. Four new Agapanthia (Epoptes) Gistel, (Coleoptera, Cerambycidae) from the West Siberia, Kazakhstan, Azerbaijan and Iran. - Euroasian Entomological Journal. 17 (3): 179-181.

Danilevsky M.L. 2020. taxa from West Europe, and North Africa to countries of former Soviet Union, and Mongolia. - In: Danilevsky M.L. (ed.). Catalogue of Palaearctic Coleoptera, vol. 6 (1), Chrysomeloidea I (Vesperidae, Disteniidae, Cerambycidae). Revised and updated edition. Leiden / Boston: Brill, i-xxii, 1-712.

Danilevsky M.L. 2021. New taxa of genus Agapanthia Audinet-Serville, 1835 (Coleoptera, Cerambycidae) from Kazakhstan and Siberia. - Humanity space. International almanac. 10 (4): 497-506.

Danilevsky M.L. 2023. Logicorn beetles (Coleoptera, Cerambycoidea) of Russia and adjacent countries. Part 3. Moscow: IAE. 873 pp. [in Russian]

Danilevsky M.L. 2024. Key to longhorned beetles (Coleoptera, Cerambycidae) of Russia. Volume 1. European part and North Caucasus. M.: IAE. 246 pp. [in Russian]

Diego Barquín J. & Martínez-Porres Cáceres R. 2005. Cerambícidos nuevos para Cantabria, Burgos y Palencia (España) (Coleoptera, Cerambycidae). - Lambillionea. 105 (1): 143-145.

Dobrosavljević J. & Mihajlović L.2014. [Contribution to the knowledge on Longhorn Beetles (Coleoptera, Cerambycidae) of Serbia, with reference to protected species]. - Sumarstvo (1-2): 21-31.

Drumont A. & Leduc F. 2011. Note sur la présence en Belgique d' Agapanthia (Epoptes) dahli (Richter, 1820) (Coleoptera, Cerambycidae, Laminae). - Lambillionea. 110 (3) (2010): 293-296.

Efimov D.A. 2001. To the Longicorn Beetle (Coleoptera, Cerambycidae) fauna of Kemerovo Region. Pp. 65-70. - In: Sbornik trudov oblastnoy nauchnoy konferentsii “Molodye uchenye - Kuzbassu. Vzglyad v XXI vek”. Mediko-biologicheskie nauki. Kemerovo: RIO KGMA. Proceedings of the regional scientific conference “Young scientists - Kuzbass. A look into the XXI century”. Biomedical sciences. Kemerovo: RIO KSMA. 256 pp. [in Russian]

Esterberg L.K. 1935. Insects of Gorky and Kirov regions. - Nature of Gorky and

Kirov regions. Gorky publishing house: 195-210. [in Russian]
Everts E.J.G. 1901. Coleoptera Neerlandica de schildvleugelige Insecten van Nederland en het aangrenzend Gebied. - Coleoptera Neerlandica. 2: iii-iv + 1-796, 62 figs & 8 pls.
Fabricius J.C. 1775. Systema entomologiae sistens insectorum classes, ordines, genera, species, adiectis synonymis, locis, descriptionibus, observationibus. Flensburgi et Lipsiae: Libraria Kortii, xxxii + 832 pp.
Fabricius J.C. 1793. Entomologia systematica emendata et aucta, secundum classes, ordines, genera, species, adjectis, synonimis, locis, observationibus, descriptionibus. Tomus I. Pars II (1792). Hafniae: C.G. Proft, xx + 538 pp.
Fabricius J.C. 1801. Systema eleutheratorum secundum ordines, genera, species, adiectis synonymis, locis, observationibus, descriptionibus. Tomus II. Kiliae: Bibliopoli Academici Novi: 687 pp.
Fuchs E. & Breuning S. 1971. Die Cerambycidenausbeute der Anatolienexpeditionen 1966-67 des Naturhistorischen Museums, Wien. - Annalen des Naturhistorischen Museums, Wien. 75: 435-439.
Isaev A.Yu. 2004. Additional data on the fauna of Lamillicorne detritophagous beetles (Scarabaeidae) and xilophagous beetles [Jewel-beetles (Buprestidae) and Longicornes (Cerambycidae)] of Ulianovsk region. - The Nature of Simbirsk Volga Area. Collection of transactions of 6th regional scientific conference "Nature-scientific investigations in Simbirsk-Ulianovsk Region". Ulianovsk.] No. 5: 64-66. [in Russian]
Ganglbauer L. 1883. [new name]. In: Heyden L. F.J.D. von, Reitter E. & Weise J.: Catalogus Coleopterorum Europae et Caucasi. Editio tertia. Berolini: Libraria Nicolai, [4] + 228 pp.
Ganglbauer L. 1884. Bestimmungstabellen europäischer Coleopteren: VIII. Cerambycidae (Schlüss). Mit Berücksichtigung der Formen Algiers und des paläarktischen Asiens, exclusive jener von Japan. - Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien, 33 [1883]: 437-586.
Georgiev G. Gjonov I. & Sakalian V. 2015. New Records of Longhorn Beetles (Coleoptera: Cerambycidae) in Strandzha Mountain. - Journal of the Entomological Research Society. 17 (2): 73-88.
Gradinarov D. & Petrova Y. 2019. Longhorn beetles (Coleoptera: Cerambycidae) from Vrachanska Planina Mountains and Vrachanski Balkan Nature Park. - In: Dimitar Bechev and Dilian Georgiev editors, Plovdiv University Press. Faunistic Diversity of Vrachanski Balkan Nature Park part 2, Zoonotes Supplement 7: 59-80.
Gradinarov D. & Petrova Y. 2020. Longhorn beetles (Coleoptera: Cerambycidae) in Sarnena Sredna Gora Mountains. - In: Dilian Georgiev, Dimitar Bechev & V. Yancheva (Eds.). Fauna of Sarnena Sredna Gora Mts, Part 1 Zoonotes Supplement 9: 159-184.
Gradinarov D., Sivilov O., Gashtarov V., Migliaccio E., Sakalian V. & Georgiev G. 2020. New records of longhorn beetles (Coleoptera: Cerambycidae) in Bulgaria. - Silva Balcanica. 21 (1): 91-112.
Gnjatović I. & Žikić V.2011. New data on longhorn beetles for the territories of

Serbia and Montenegro (Coleoptera, Cerambycidae) with the detailed description of Callimoxys gracilis (Brullé 1832). - Biologica Nyssana. 2 (2): 35-38.

Herbst J.F.W. 1784. Kritisches Verzeichniβ meiner Insectensammlung.- Archiv der Insectengeschichte, herausgegeben von J.C. Fuessly, Hefte. 4-5: 1-151, Tab. 19-30.

Hernández J.M.2011. Estructura del órgano estridulador y análisis de la emisión acústica de Agapanthia dahli (Richter, 1821) (Coleoptera, Cerambycidae, Lamiinae). - Animal Biodiversity and Conservation. 34 (2): 257-264.

Hua L.-Z. 2002. List of Chinese Insects. - Zhongshan (Sun Yat-sen) University Press, Guangzhou. List of Chinese Insects. 2: 1-612.

Holecová M., Lachowska D. & Karagyan G. 2002. Karyological Notes on Six Beetles Species from Armenia (Coleoptera: Tenebrionidae, Cerambycidae, Curculionidae). - Folia biologica, Krakow. 50 (1-2): 9-12, 7 figs.

Holzschuh C. 1975. Neue westpalaearktische Bockkäfer aus den Gattungen Cortodera, Vadonia und Agapanthia (Coleoptera: Cerambycidae). - Zeitschrift der Arbeitsgemeinschaft österreichischer Entomologen. 26 (2-4) [1974]: 77-90.

Kadyrbekov R.H. & Tleppaeva A.M. Review of longicorn beetles (Coleoptera, Cerambycidae) of Almaty region. - Tethys Entomological Research. 16: 45-58. [in Russian]

Kadyrov A.K. 1989. Review of the fauna of longhorn beetles (Coleoptera, Cerambycidae) of Tadzhikistan. - Records of the Academy of Sciences of Tajik SSR (department of biological sciences). (1): 30-35. [in Russian]

Karpiński L., Szczepański W.T., Plewa R., Walczak M., Hilszczański J., Kruszelnicki L., Łoś K., Jaworski T., Bidas M. & Tarwacki G. 2018. New data on the distribution, biology and ecology of the longhorn beetles from the area of South and East Kazakhstan (Coleoptera, Cerambycidae). - ZooKeys. 805: 59-126.

Kasatkin D.G. 2020. Contribution to the knowledge of the genus Agapanthia Audinet-Serville, 1835 (Coleoptera: Cerambycidae: Lamiinae) from the Near East and Transcaucasia. - Caucasian Entomological Bulletin. 16 (2): 233-249.

Kasatkin D.G. & Arzanov Ju.G. 1997. “Der Bockkaffer (Cerambycidae). Material fur Fauna der Kaffer (Coleoptera) norden Kaukasus und untere Don.” [wrong translation of the Russian title of the article; must be: “Die Bockkäfer (Cerambycidae) (Teil 2). Die Materialen zur Käferfauna (Coleoptera) des Nordkaukasus und des unteren Don] Records of Kharkov Entomological Society. 5 (2): 63-70.

Kazjutshits A.V. 1988. New species of longicorn beetles (Coleoptera, Cerambycidae) from Transcaucasia. - Revue d'Entomologie. 67 (3): 583-584. [in Russian]

Klausnitzer B., Klausnitzer U., Wachmann E. & Hromádko Z. 2016. Die Bockkäfer Mitteleuropas. Cerambycidae. Band 2: Die mitteleuropäischen Arten. Die Neue Brehm-Bücherei. 499 (2): 3-303, 84, photos. VerlagsKG Wolf. Magdeburg.

Kostin I.A. 1973. The Dendrophagus Beetles of Kazakhstan (Buprestidae, Cerambycidae, Ipidae). Alma-Ata: 288 pp. [in Russian]

Kovács T.1998. Magyarországi cincérek tápnövény- és lelőhelyadatai II. (Coleoptera: Cerambycidae). - Folia Historico-Naturalia Musei Matraensis. 22 (1997): 247-255.

Kulenko A.V. 2015. The Longhorn beetles (Cerambycidae) of the environs of Togliatti and Zhigulyovsk. - Humanity space. International almanac. 4 (5): 1091-1107. [in Russian]

Lazarev M.A. 2013a. Two new subspecies of Agapanthia dahli (Richter, 1821) from Dagestan and Armenia (Coleoptera, Cerambycidae). - Humanity space. International almanac. 2 (3): 443-448.

Lazarev M.A. 2013b. A new subspecies of Agapanthia dahli (C.F.W. Richter, 1820) from North-East Kazakhstan (Coleoptera: Cerambycidae). - Studies and Reports of District Museum Prague-East, Taxonomical Series. 9 (1): 127-131.

Lazarev M.A. 2014. Taxonomy notes (Coleoptera, Cerambycidae). - Humanity space. International almanac. 3 (2): 272-285.

Lazarev M.A. 2024. Taxonomic notes on longhorned beetles with the descriptions of several new taxa (Coleoptera, Cerambycidae). - Humanity space. International almanac. 13 (1): 21-38.

Lin M.-Y. [Meiying] & Tavakilian G. 2019: Subfamily Lamiinae Latreille, 1825, pp 216-408. - In: Lin M.-Y. [Meiying] & Yang X.-K. [Xingke] (ed.). Catalogue of Chinese Coleoptera, volume 9. Chrysomeloidea: Vesperidae, Disteniidae, Cerambycidae. Beijing: Science Press: i-xii, 575 pp.

Listvyagova N.A., Raykhert A.I. & Skribchenko A.V. 2013. Catalog of the collection of longhorned beetles (Insecta, Cerambycidae, Lepturini) of the Zoological Museum of Khakass State University. N.F. Katanova (message 2). - Bulletin of N.F. Katanov Khakass State University. 6: 23-29.

Lobanov A.L., Danilevsky M.L. & Murzin S.V. 1982. Systematic list of longicorn beetles (Coleoptera, Cerambycidae) of the USSR. 2.- Revue d'Entomologie. 61 (2): 252-277.

Löbl I. & Smetana A. (ed.) 2010. Catalogue of Palaearctic Coleoptera, Vol. 6. Chrysomeloidea. Stenstrup: Apollo Books. 924 pp.

Martynov V.V. & Pisarenko T.A. 2004. A review of the fauna and ecology of the long-horned beetles (Coleoptera: Cerambycidae) of southeast Ukraine. - The Kharkov Entomological Society Gazette. 11 (2003) (1-2): 44-69.

Matveev V.A. 1998. Xilophagous insects of Volga-Viatka region. Joshkar-Ola. 93 pp.

Mikhailov Yu.E. 1999. Insects of "Arkaim" museum-natural reserve. Beetles: species composition and notes on the structure of populations. - Natural systems of South Urals. Cheljabinsk. Cheljabinsl University: 221-248. [in Russian]

Miroshnikov A.I. 1984. New information about woodcutter beetles (Coleoptera, Cerambycidae) of the Northwestern Caucasus. - Entomological Review. 63 (2): 273-281. [in Russian]

Miroshnikov A.I. 2011. Family Cerambycidae - Longhorn-beetles, Timber-beetle. (pp. 239-263). In: Zamotajlov A.S. & Nikitsky N.B. (red.) Coleopterous Insects (Insecta, Coleoptera) of Republic of Adygheya (annotated catalogue of species) (Fauna conspecta of Adygheya. N1). Maykop: Adyghei State University Publishers] (2010): 404. [In Russian]

Molnar B., Szerényi G. & Szövényi G.2016. Az érdi Fundoklia-völgy

rovarfaunisztikai kutatása. - Állattani Közlemények. 101 (1-2): 43-64.
Mouthiez J. & Péru L. 2008. Liste des Longicornes observés dans le département du Loiret (Coleoptera Cerambycidae). - L'Entomologiste, Paris. 64 (2): 109-111.
Mulsant E. 1839. Histoire naturelle des Coléoptères de France. Longicornes. Maison Libraire, Paris. Imprimerie de Dumoulin, Ronet et Sibuet, Lyon. 304 pp.
Mulsant E. 1863. Histoire Naturelle des Coléoptères de France. Longicornes. - Annales de la Société Impériale d'Agriculture, d'Histoire Naturelle et des Arts Utiles de Lyon 1862: 1-480.
Nikitsky N.B. 2019. Family Cerambycidae Latreille 1802 - longhorned beetles, or cerambycidae, Pp. 528-578. - In: Coleoptera insects (Insecta, Coleoptera) of the Moscow Region. Part 2. Moscow; Berlin: Direct-Media. 791 pp.
Novozhenov Yu.I. 1987. Fauna of woodcutters of the Ilmensky Nature Reserve, Southern Urals. - Fauna, ecology of invertebrate animals of the Chelyabinsk region. Sverdlovsk UO USSR Academy of Sciences: 29-47. [in Russian]
Olivier A.G. 1795. Entomologie, ou histoire naturelle des insectes. Avec leur caractéres génériques et spécifiques, leur description, leur synonymie, et leur figure enluminée. Coléoptères. Tome quatrième. Paris: de Lanneau, 519 pp. +72 pls. [each gender has independent pagination: 67 - Cerambyx: 1-132; 68 - Saperda: 1-41; 70 - Callidium: 1-72].
Özdikmen H. 2007. The Longicorn Beetles of Turkey (Coleoptera: Cerambycidae). Part I - Black Sea Region. - Munis Entomology & Zoology. 2 (2): 179-422.
Özdikmen H. 2013. Turkish Agapanthiini Mulsant, 1839 with identification keys (Coleoptera: Lamiinae). - Munis Entomology & Zoology. 8 (1): 9-40.
Özdikmen H. 2021. An annotated catalogue: Cerambycoidea (Cerambycidae and Vesperidae) of Turkey (Coleoptera). - Munis Entomology & Zoology. 16 (Suplement): 1273-1556.
Özdikmen H. 2024. Cerambycoidea of Turkey (Cerambycidae and Vesperidae) (Coleoptera). - Munis Entomology & Zoology. 19 (supplement): 1153-2614.
Pavićević D., Ilić N. & Đurić M.2015 Longhorn beetles of Serbia field guide. Zavod za zaštitu prirode & HabiProt, Belgrade: 1-249.
Pesarini C. & Sabbadini A. 2004. Osservazioni sulla sistematica della tribù Agapanthiini Mulsant, 1839 (Coleoptera Cerambycidae). - Atti della Società Italiana di Scienze Naturali e del Museo Civico di Storia Naturale in Milano. 145 (1): 117-132.
Pic M. 1900. Descriptions. - Matériaux pour servir à l'étude des Longicornes. 3 (1): 11-16.
Pic M. 1905. Descriptions et Notes Diverses. - Matériaux pour servir à l'étude des Longicornes. 5 (2): 5-15.
Pic M. 1908. Notes diverses et diagnoses. - Matériaux pour servir à l'étude des Longicornes. 7 (1): 2-6.
Pic M. 1910. Catalogue bibliographique et synonymique des longicornes d'Europe et régions avoisinantes: suite. Pp. 95-98 [pagination speciale]. In: Matériaux pour servir à l'étude des longicornes. 7ème cahier, 2ème partie. Lyon: Imprimerie Jacquet Frères: 95-98 pp.
Plavilstshikov N.N. 1927. Addenda et corrigenda concernant le Coleopterorum Catalogus, parties 73 et 74 (Lamiinae) de Chr. Aurivillius. - Encyclopédie

Entomologique (Paris) Ser. B. I. Col. 2: 49-68.
Plavilstshikov N.N. 1929. Synonymische Bemerkungen über Agapanthia-Arten (Coleoptera, Cerambycidae). - Entomologisches Nachrichtenblatt. 3: 103.
Plavilstshikov N.N. 1930. Die Agapanthia-Arten der palaearktischen Region. Bestimmungs-Tabellen der europaeischen Coleopteren. 98. Heft. Troppau: Edmund Reitters Nachfolger Emmerich Reitter. 40 pp.
Plavilstshikov N.N. 1932. Timber-beetles - Timber Pests. Moscow, Leningrad. 200 pp. [in Russian]
Plavilstshikov N.N. 1948. A Key for Longicorn Beetles of Armenia. Erevan. 232 pp. [in Russian]
Plavilstshikov N.N. 1965. 75-th Fam. Cerambycidae - Timber Beetles, Longicornes. - In: A Key to Insects of the European Part of the USSR, v. 2, Coleoptera and Strepsiptera. Moscow-Leningrad, "Nauka": 389-419. [in Russian]
Plavilstshikov N.N. 1968. Review of the genus Agapanthia Serv. (Coleoptera, Cerambycidae) of the USSR fauna. - Archives of Zoological Museum Moscow State University. 11: 113-168.
Rabil J. 1992. Catalogue des Coléoptères de la Forêt de la Grésigne (Tarn). - Nouvelles Archives du Muséum d'Histoire Naturelle de Lyon. 29-30: 1-174.
Rejzek M., Sama G., Alziar G. & Sadlo J. 2003. Host plants of longhorn beetles (Coleoptera: Cerambycidae) from the Balkan Peninsula, Asia Minor, and Iran (Part II). - Biocosme Mésogéen, Nice. 19 (2002) (3): 161-189.
Reitter E. 1898. Ueber die bekannten und einige neue palaearctische Agapanthia-Arten. - Wiener Entomologische Zeitung. 17 (4-5): 130-135.
Richter C.F.W. 1821. Supplementa faunae insectorum Europae. Teil 1 [1820]. Vratislaviae: Richter, 3 + 12 pp. + 12 pls
Reitter E. 1913. Fauna Germanica. Die Käfer des Deutschen Reiches. Nach der analytischen Methode bearbeitet. IV. Band. [1912]. Stuttgart: K.G. Lutz' Verlag: 236 pp., pl. 129-152.
Sakenin H., Samin N., Moemen Beitollahi S., Ezzatpanah S., Havaskary M., Rastegar J., Valizadeh A. & Shakouri M.J. 2011. A study on the longhorn beetles (Coleoptera: Cerambycidae) from north-western Iran. - Calodema. 143: 1- 19.
Sama G. 1979. Una nuova specie di Agapanthia Serville di Macedonia (Coleoptera: Cerambycidae). - Bolletino del Museo Civico di Storia Naturale di Verona. 5 (1978): 505-513.
Sama G. 2003. Atlas of Cerambycidae of Europe and the Mediterranean area. Vol. 1: northern, western, central and eastern Europe, British Isles and continental Europe from France (excl. Corsica) to Scandinavia and Urals. Zlín: Kabourek (2002), 173 pp.
Sama G., Buse J., Orbach E., Friedman A.L.L., Rittner O. & Chikatunov V. 2010. A new catalogue of the Cerambycidae (Coleoptera) of Israel with notes on their distribution and host plants. - Munis Entomology & Zoology. 5 (1): 1-51.
Sama G., Fallahzadeh M. & Rapuzzi P. 2005. Notes on some Cerambycidae (Coleoptera) from Iran with description of two new species (Insecta Coleoptera Cerambycidae). - Quaderni di Studi e Notizie di Storia Naturale

della Romagna. 20: 123-132.
Sama G., Rapuzzi P. & Kairouz A. 2010. Catalogue commenté des Cerambycidae du Liban. An annotated catalogue of the Cerambycidae of Lebanon (Insecta Coleoptera Cerambycidae). - Quaderni di Studi e Notizie di Storia Naturale della Romagna. 30: 131-201.
Sama G., Seddighi N. & Talebi A.A. 2008. Preliminary note for a checklist of the Cerambycidae of Iran (Coleoptera - Cerambycidae). - Biocosme Mésogéen, Nice. 25 (3): 101-126.
Sautière C. 2005. Les Cerambycidae des îles et franc-bords de la Loire entre Tours et Amboise (Indre-et-Loire). - Bulletin de Liaison de l'Entomologie Tourangelle et Ligérienne, Saint-Cyr sur Loire. 26 (1): 10-28.
Schaufuss C.F.C. 1916. Calwer's Käferbuch; Einführung in die Kenntnis der Käfer Europas. Stuttgart, Schweizerbart'sche Verlag (sechste Auflage) 2: 709-1390, figs 251-254, pls 21-48.
Seidlitz G.C.M. von. 1891. Fauna Transsylvanica. Die Kaefer (Coleoptera) Siebenbürgens. Königsberg: Hartungsche Verlagsdruckerei, [12] + lvi + 192 + 914 pp., 1 pl. [issued in parts: Pp. i-xl, Gattungen 1-48, Arten 1-240 in 1888; Pp. xli-lvi, Gattungen 49-128, Arten 241-544 in 1889; Pp. xlix-lvi, Gattungen 129-192, Arten 545-914 in 1891].
Secchi F. 1998. De quelques longicornes de la région d'Orléans (Loiret) (Coleoptera Cerambycidae). - L'Entomologiste, Paris. 54 (5): 223-230.
Shapovalov A.M., Nemkov V.A., Rusakov A.V. & Shovkun D.F. 2006. [Longicorn-beetles (Coleoptera, Cerambycidae) of Orenburg Region. - Vestnik of Orenburg State University], 4: 105-109. [in Russian]
Shapovalov A.M. 2012. Longicorn-beetles (Coleoptera, Cerambycidae) of Orenburg Region: fauna, distribution, bionomy. Archives of Orenburg Branch of Russian Entomological Society, 3. Orenburg: Orenburg Branch of Russian Entomological Society. 224 p. [in Russian]
Shernin A.I. 1974. Sem. Cerambycidae - Longhorned beetles (pp. 174-181, 219). Chapter 7. Order Coleoptera - Coleoptera (p. 111-227). - In: Shernin A.I. (ed.) Fauna of the Kirov region. Issue 2. Kirov: Kirov Pedagogical Institute. 523 pp. [in Russian]
Sláma M. 1998. Tesaříkovití - Cerambycidae České republiky a Slovenské republiki (Brouci - Coleoptera). Praha. 383 pp.
Steiner S.& Schmid H. 2013. Eine neue Agapanthia-Art (Coleoptera: Cerambycidae: Lamiinae: Agapanthiini) aus Griechenland. - Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen. 65: 1-4.
Stierlin W.G. 1898. Fauna coleopterorum helvetica: die Käfer-Fauna der Schweiz nach der analytischen Methode. Fauna Insectorum Helvetiae. Coleoptera Helvetiae. Zweiter Band Schaffhausen: Bolli & Böcherer. 2: 3-662 + iii-xii.
Stolbov V.A., Sergeeva E.V., Lomakin D.E. & Sheykin S.D. 2019. A check-list of longicorn beetles (Coleoptera: Cerambycidae) of Tyumenskaya Oblast of Russia. - Euroasian Entomological Journal. 18 (3): 199-212. [in Russian]
Švácha P. & Lawrence J.F. 2014. Arthropoda: Insecta: Coleoptera. Morphology and Systematics (Phytophaga). 2.4 Cerambycidae Latreille, 1802. - In: Walter de Gruyter, Handbook of Zoology, 3: i-xii + 1-676, 465 figs. Edited by

Richard A.B. Leschen & Rolf G. Beutel.

Tiberghien G. 2010. Observations sur les Coléoptères de la chaîne pyrénéenne et régions limitrophes. 12 ème note: Cerambycidae (Coleoptera Phytophagoidea), suite. - Bulletin de la Société Linnéenne de Bordeaux. (145) 38 (1): 59-66.

Trócoli S., Mercadé A., Oliete C. & Aibar R. 2023. Los Longicornios del Moianès (Barcelona, Catalunya) Les Longicornes du Moianès (Barcelona, Catalogne) (Coleoptera, Cerambycidae, Vesperidae). - Revue de l'Association Roussillonnaise d'Entomologie (R.A.R.E.). 32 (4): 237-247.

Tsherepanov A.I. 1984. Longicorn Beetles of North Asia (Lamiinae: Pterycoptini - Agapanthiini). Novosibirsk. 214 pp. [in Russian]

Tsherepanov A.I. 1985. Longicorn Beetles of North Asia (Lamiinae: Saperdini - Tetraopini). Novosibirsk. 256 pp. [in Russian]

Verdugo Páez A. 2008. Contribución al conocimiento de los cerambícidos de Andalucía. V. Stenurella hybridula (Reitter, 1901) nuevo para Andalucía, y datos interesantes sobre otras especies (Coleoptera, Cerambycidae). - Boletín de la Sociedad Entomológica Aragonesa. 43: 483-485.

Villiers A. 1967. Contribution à la faune de l'Iran. I. - Coléoptères Cerambycidae. - Annales de la Société Entomologique de France (N.S.). 3 (2): 327-379.

Villiers A. 1978. Faune des Coleopteres de France, 1. Cerambycidae. Paris. 636 pp.

Winkler A. 1929: Cerambycidae. Pars 9: 1135-1136; pars 10: 1137-1226. In: Catalogus Coleopterorum regionis palaearcticae. Wien: A. Winkler Verlag. 1698 pp.

Yablokov-Khnzoryan S.M. 1961. Experience in reconstructing the genesis of the beetle fauna of Armenia. Yerevan: Publishing House of the Academy of Sciences of the Armenian SSR. 265 pp. [in Russian]

Zaitzev F.A. 1954. Timber-beetles (Cerambycidae) in the fauna of Georgia. - Archives of the Institute of Zoology of the Academy of Sc. Of Georgian SSR. 13: 5-27. [in Russian]

Zamoroka A.M. 2022. The longhorn beetles (Coleoptera, Cerambycidae) of Ukraine: Results of two centuries of research. - Biosystems Diversity. 30 (1): 46-73.

Zamoroka A.M., Panin R.Y., Kapelukh Y.I. & Podobivskiy S.S. 2012. The catalogue of the Longhorn Beetles of Western Podillya, Ukraine (Coleoptera: Cerambycidae). - Munis Entomology & Zoology. 7 (2): 1145-1177.

Received: 10.01.2025
Accepted: 07.03.2025

Humanity space *International almanac* VOL. 14, No 1, 2025: 80-94
Гуманитарное пространство *Международный альманах* ТОМ 14, № 1, 2025: 80-94
http://zoobank.org/urn:lsid:zoobank.org:pub:DE492F66-3FB9-46A3-920B-468389D8C5E9
DOI: 10.24412/2226-0773-2025-14-1-80-94
EDN: TWKUPR

Review of the "*hebridanus*" species group of the genus *Cacodacnus* Thomson, 1861 (Coleoptera, Cerambycidae, Prioninae) with new combinations, description of a new species from Fiji and key to species

A.S. Zubov[1], A. Drumont[2]

[1]Dacia 38/6 ap.36, Kishinev MD-2062 Moldova
e-mail: riprulez@mail.ru

[2]O.D. Taxonomy and Phylogeny - Entomology, Royal Belgian Institute of Natural Sciences Vautier str. 29, Brussels B-1000 Belgium
e-mail: a.drumont@naturalsciences.be
ORCID 0000-0001-9357-473X

Key words: Cerambycidae, Coleoptera, longhorn beetles, Catypnini, taxonomy, new species.
Abstract. The genus *Cacodacnus* Thomson, 1861 is partially revised with a specific study of the "*hebridanus"*species group. As a result, four species have been differentiated inside the *hebridanus* species group. New combination is proposed for *Acrhetypus* ?*deplanchei* Thomson, 1867 from New Caledonia: *Cacodacnus deplanchei* (Thomson, 1867) **n. comb.** *Cacodacnus kozlovi* **sp. n.** is described from Fiji (Viti Levu, Vanua Levu).

Introduction

Cacodacnus Thomson, 1861 is a small genus within the recently revalidated tribe Catypnini Lacordaire, 1868 by Jin et al. (2023). This genus has been described from New Hebrides (Vanuatu) to include one new species *C. hebridanus*. Next species were described as *deplanchei* Thomson, 1867 (as *Archetypus* ?) from New Caledonia (*in* Fauvel, 1867), *rasilis* Olliff, 1888 (as *Toxeutes rasilis*) from Norfolk island, *planicollis* Blackburn, 1895 from Australia, *lameerei* Aurivillius, 1925 from Papua, *and occidentalis* Ślipiński et al., 2023 also from Australia.

Lameere (1904, 1913 & 1919) regarded *deplanchei* and *rasilis* as being synonyms of *hebridanus*. This position was followed by McKeown (1947) in his catalogue of the Cerambycidae of

Australia, as well as by several authors after him.

More recently, Ślipiński et al. (2023) recognized *Cacodacnus hebridanus* as a complex of species occurring in New Caledonia, Norfolk island, Papua New Guinea, Vanuatu and Fiji. These authors did not go any further in their interpretation due to a lack of material and few genetic sequences. In their work, they place specimens from Fiji under *C. hebridanus*.

Specimens from Fiji were known for a long time (Fairmaire, 1881, Evenhuis & Ramsdale, 2006), but good comparison with types wasn't made yet.

Recently, we have had the possibility to examine and study types of the taxa *hebridanus*, *deplanchei* and *rasilis*, as well as rather consistent series of specimens. Results of this analyze show that exemplars from New Hebrides (Vanuatu), New Caledonia and Fiji represent separate species.

New combination is proposed for *Acrhetypus* ?*deplanchei* Thomson, 1867 from New Caledonia: *Cacodacnus deplanchei* (Thomson, 1867) **n. comb.** In addition, *Cacodacnus kozlovi* **sp. n.** from Fiji is being described and illustrated.

Material and methods

The specimens are preserved dry, pinned or glued on cards. The author have used. Comparative analysis of exmplars by using methods of morphological examination was made using stereo microscope Zeiss Stemi 2000-C.

More than 57 specimens belonging to the "*hebridanus*" group have been examined for this study.

Total length was measured as the distance between the tip of the mandibles and the apex of elytra.

The material discussed below is housed in the following collections (with the names of their curators in parentheses for institutions mentioned), given with the respective acronym used in the text:

AD - private collection of Alain Drumont (Brussels, Belgium).

AM - collection of Australian Museum (Sydney, Australia) (D. Smith and N. Tees).

AT - private collection of Andrey Yu. Titarenko (Moscow, Russia).

AZ - private collection of Andrey Zubov (Moscow, Russia).
AK - private collection of Anton Kozlov (Moscow, Russia).
CR - private collection of Claude Ripaille (Lias, France).
JD - private collection of Jirí Dvoracek (Krenov, Cesky Krumlov, Czech Republic).
LT - private collection of Laurent T'Joen (Bures-sur-Yvette, France).
MNHN - collection of Muséum national d'Histoire naturelle (Paris, France) (A. Mantilleri, T. Deuve & G. Tavakilian).
ND - private collection of Norbert Delahaye (Plaisir, France).
RBINS - collection of Royal Belgian Institut of Natural Sciences (Belgium, Bruxelles: W. Dekoninck).

Result

***Cacodacnus deplanchei* (Thomson, 1867) n. comb.**

Archetypus ? deplanchei Thomson, 1867a in Fauvel: 205.
Cronodagus deplanchei, Thomson, 1867b: 89.

Type locality: New Caledonia: Lifu.
Diagnostic characters: see differential diagnosis of the new species given below and in the key below.
Type material examined: Holotype, male, Opheltes ?Archetypus ?Deplanchei Fvl, Lifu in MNHN.
Distribution: New Caledonia (Grande-Terre and Lifou island of the Loyalty islands).
Notes: The holotype (Figs 1-2) of *Archetypus* ?*deplanchei* is a very small specimen of 25 mm and, as Thomson (1857) pointed out, the individual he received from Mr. Albert Fauvel is in very poor condition (see the figure 17 given by Thomson which illustrated it with just the first two remaining antennal articles).

The specimen is in fact much more damaged than in Thomson's drawing (see Figure 1 of our study), with the head and pronotum stuck to the rest of the body. After Thomson, an antenna was glued back on from another species of Prioninae.

Furthermore, the type specimen is an immature specimen in which the colouration and characters of the elytra are not fully developed. It was probably for this reason that Thomson turned to the genus *Archetypus* for the description of his species *deplanchei*,

without reattaching it to the genus *Cacodcnus* he described some years ago, finding that it nevertheless had an armature quite different from representatives of the genus *Archetypus*.

We therefore used a specimen of the same size from New Caledonia in the RBINS collections (Canala, ex. coll. A Fauvel) as a point of comparison for our study of the *deplanchei* species.

Figs 1-2. *Archetypus* ?*deplanchei* Thomson, 1861: 1 - Holotype, male, collection of MNHN; 2 - Labels of holotype. (Photos by Jérôme Constant).

Cacodacnus rasilis (Olliff, 1888)

Toxeutes rasilis Olliff, 1888: 1010; 1890: 72, pl. X, fig. 1.
Cacodacnus rasilis, Ślipiński, de Keyzer & Jin, 2023: 302, figs 134A (male), 134B-D, 158H (syntype), 158J (syntype male).

Type locality: Australia: Norfolk island.
Diagnostic characters: see differential diagnosis of the new species given below and in the key below.
Type material examined: Toxeutes rasilis Type. A.S. Olliff Norfolk Il / Type preserved in AM. Another syntype is present in MNHN and

illustrated in Ślipiński et al. (2023), fig. 158H).
Distribution: Australia, Norfolk island.

***Cacodacnus kozlovi* sp. n.**
Figs 3-4

Type locality: Fiji, Viti Levu island.
Description. Holotype: male (length 36 mm): light brown; head, mandibles, 1st antennae segment darker brown; head, antennae, mandibles, elytra and legs hairless and glabrous; body in long golden hairs; head quite big, almost long as wide and almost as wide as pronotum and elytra with short impression between the eyes; frons closer to clypeus with wide and deep horizontal impression; mandibles long, as long as head, curved, with 2 denticles at the apex, second denticle slightly looks up; in coarse dense punctuation at the external sides closer to the base, other surface almost glabrous, mandibles covered with rare and short golden hairs; eyes rather small, long and narrow; head punctuation strong and dense, sparser and glabrous at the vertex; antennae long, slightly shorter than the body; 1st antennal segment slighty thickened, short and oval, in thin quite dense punctuation, glabrous; 3rd segement long, same length as the width of pronotum, 5th segment slightly longer than 4th; prothorax process thin; pronotum rectangular, almost 2 times wide as long, strongly narrowed at the base, pronotum slightly flattened with 4 small spines on the sides; pronotum glabrous with very dense punctuation on the sides and in the center, with two big callosities in the center of pronotum; elytra straight, long and parallel, almost 2,1 times long as wide, slightly widened in the middle, glabrous, with rare deep punctures mostly located at the base, and more glabrous to the apex; elytra; each elytra with 4 slightly notable costae, sometimes barely visible; legs thin and quite short, without spines and curves; legs light brown.

Male variation: size varies from 27 mm to 45 mm, average size around 33 mm; on some specimens elytra are a bit widened at the center of the elytra, while on some others specimens elytra can exhibit 6 notable costae; some specimen are darker, especially pronotum and head which are dark brown; antennae can be a little bit shorter, not reaching apex of elytra; pronotum spines at some

specimens are more visible and look more as spines than flattened angles, but variation is not so consistent and overall form of pronotum is visibly uniform.

Females (length 29-40 mm): light brown; body glabrous, almost without hairs; head short, almost as long as length of pronotum, quite wide, covered by dense punctation, slightly glabrous, mandibles short, pronotum rectangular, 4 spines at the sides clearly visible and a bit elongated, center of pronotum wider, with bigger spines; pronotum covered by dense, small punctation, except the callosities; elytra quite long, approximately 2,3 long as wide; elytra covered by quite rare small punctures; antennae short, barely longer than half of the body; 3rd antennae segment longer, a bit shorter than length of pronotum; eyes a bit bigger than in males.

Differential diagnosis. All examined males of *C. kozlovi* **sp. n.** are with elongated mandibles (major form), so the comparison is made on males of different species with also elongated mandibles. Minor forms (specimen without elongated mandibles) of some other species were examined, they show less visible differences, but clear comparison of minor forms can't be made as minor forms of *C. kozlovi* are still unknown.

C. kozlovi shows clear signs of *hebridanus* group and is very close to *C. hebridanus* and *C. deplanchei*, but shows a number of clear signs that differ from these later species.

Species with elongated mandibles of "*hebridanus*" group: *C. hebridianus*, *C. deplanchei*, *C. kozlovi*, *C. lameerei* can be easily distinguished from *C. planicollis*, *C. rasilis* and *C. occidentalis* by the absence of 3rd tooth at the center (or closer to the base) of mandibles in the *hebridanus* group. This is true for major males because several minor males of *deplanchei* exhibit a 3rd or a 4th visible tooth on the internal side of the mandible. But *C. deplanchei* has very different pronotum shape in males and females.

Major form of *planicollis* has short and wide mandibles with barely visible 3rd tooth, clearly visible at most specimen and barely visible at some major forms. Anyway, *C. planicollis* has very short and wide mandibles, and even in major forms, mandibles are clearly shortest than the head. The only other species with short and wide mandibles is *C. occidentalis*, but it has a big tooth at the base of mandibles and no third tooth at the apex. Major form of *C. rasilis* has

slightly widened mandibles at the center with barely visible tooth, but clearly widened that makes it easy to recognize. Minor forms of *C. rasilis* always have a visible tooth at the center of mandibles.
Known minor specimen of *C. hebridanus* don't have teeth at the center of mandibles. Several minor specimen of deplanchei from New Caledonia exhibit teeth in the center of mandibles and one of 37 mm exhibits 4 teeth in the center of the mandible. Later comparision will be made only between species of *hebridanus* group.

Note from Ślipiński et al. (2023). "Species in this complex differ from the continental Australian species by having the prothorax with the spine that originates at the anterior corner very stout and short, and usually straight, or almost completely absent."

Cacodacnus lameerei can be distinguished well from other species of the hebridianus complex by the shape of pronotum; its shape is less rectangular, spines are thinner, center of pronotum is not so wide, so pronotum has clearly different shape, sometimes apex of pronotum is wider (at major forms) that we don't meet at other species of "*hebridanus*" complex; also the base of pronotum on the sides of *C. lameerei* has long golden hairs, other species are hairless and glabrous.

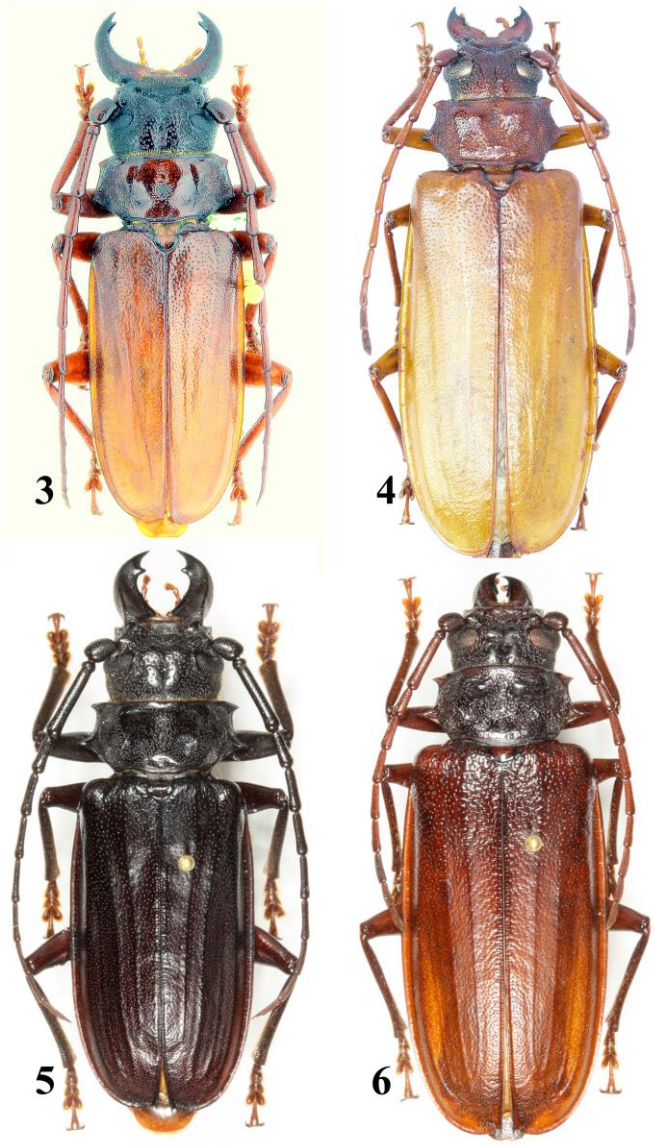
C. lameerei can be easily distinguished from *C. kozlovi* **sp. n.** first of all by the pronotum shape. *C. lameerei* is a bigger species, head is wider comparing to it's pronotum; pronotum is less rectangular in both males and females; mandibles are longer but relatively thinner, especially at the base; 3rd antennal segment is longer (clearly longer than the pronotum width) in both males and females; eyes are relatively wider and bigger both in males and females; elytra length is longer comparing to it's base, expecially in major forms, also both in males and females. Minor form mandibles are shorter, as long as the head size, other characters remain almost the same.

Cacodacnus hebridanus is also a bigger species (size 35-46 in our sample, n = 14; AD, LT & RBINS, with average 41 for males and 38 for females) than *C. kozlovi* **sp. n.** and has well distinguished major form with elongated mandibles and more widened elytra. It can also be easily distinguished from *C. kozlovi* **sp. n.** by longer 3rd antennal segment that is longer than the pronotum length (in minor form 3rd segment is shorter, but also relatively longer than in

C. kozlovi **sp. n.**, though the comparision should be made also with minor forms); mandibles in major forms much longer, longer than head, in minor forms mandibles shorter than head; elytra less parallel and wider at the center; pronotum is more rectangular in its shape and the center is clearly more widened, so central spines seems bigger both in males and females. Females of *C. hebridanus* have longer antennae, clearly longer than half of the body; have clearly longer 3rd antennal sement; have wider head and pronotum.

By mandibles shape *Cacodacnus deplanchei* (Figs 5-6) differs well from other species of *hebridanus* complex. *C. deplanchei* seems to be bigger than *C. kozlovi* **sp. n.** (deplanchei size 24 - 49 in our sample, n = 22; AD, JD, LT, with average size about 35 mm for males and 41 mm for females; kozlovi size 27 - 45, with average 33 mm for males and 35 mm for females). Major males mandibles are elongated, as long as head, very wide and have denser punctation than *C. kozlovi* **sp. n.**; mandibles wide, shorter than head im minor forms (see Holotype photo, Fi. 1), and apical denticles have long distance between them; these characters make *C. deplanchei* easily recognizable comparing to *C. kozlovi* **sp. n.** and *C. hebridanus*. Pronotum is also clearly much more rectangular with longer spines. 3rd antennal segment as long as the pronotum length even in biggest specimens.

Materials. Holotype, male, Fiji, Viti Levu isl., 4-7.II.2015 - AZ; 40 Paratypes; 1 female, Fiji, Viti Levu, Nadarivatu, 26.VII.1994 - JD; 1 female, Fiji, Viti Levu, Namaquamaqua, X.2004 - AD ; 2 females, Fiji, Vanua Levu, I.2014 - AT; 1 male, 1 female, Fiji, Viti Levu, Navai village, 23-26.I.2015, B. Bubenik leg. - LT; 1 male, 1 female, Fiji, Viti Levu, Navai village, I.2015, B. Bubenik leg. - ND; 2 males, 3 females, Fiji, Viti Levu, Navai village, without date, B. Bubenik leg. - AD; 1 male, 1 female, Fiji, Viti Levu, Navai village, without date, B. Bubenik leg. - ex AD, will be deposited in RBINS, I.G.: 34.953; 1 male, 1 female, Fiji, Viti Levu, II.2015; 1 male, 1 female, Fiji, Vanua Levu, I.2014 - AZ; 2 males, 2 females, Fiji, Viti Levu, Suva, 4-7.II.2015- AT; 2 males, 1 female, Fiji, Viti Levu, Central Mts, I.2016, leg. B. Bubenik - AD; 2 males, 2 females, Fiji, Viti Levu, Suva, 5-23.02.2016 - AK; 1 male with the same label - AZ; 3 males, 5 females, Fiji, Viti Levu, X.2022, local coll. leg - ND; 1 female, Fiji, Viti Levu, IX.2023, local coll. leg - CR; 1 male, 1 female, same data - ND; 3 males, 3 females, Navosa, Viti Levu, Fiji, X.2023 - ND.



Figs 3-4. *Cacodacnus kozlovi* **sp.n.** 3 - Holotype male (36 mm); 4 - Paratype female with the same label (36 mm). (Photos: Dmitry Fominykh).
Figs 5-6. *Cacodacnus deplanchei* (New Caledonia): 5 - Male (41 mm); 6 - Female (38 mm). (Photos: Laurent T'Joen)

Distribution. The new species is currently only known from Fiji (Viti Levu, Vanua Levu).

Etymology. The new species is named after Anton Kozlov (Moscow, Russia) for his contribution to the study of Prioninae, Cerambycidae and especially his help with the specimens and study of the new species.

Updated list of *Cacodacnus* species and their distribution

1. *C. deplanchei* (Thomson, 1867): New Caledonia, **n. comb.**
2. *C. hebridanus* Thomson, 1861: New Hebrides (Vanuatu)
3. *C. kozlovi* **n. sp.**: Fiji
4. *C. lameerei* Aurivillius, 1925: Papua New Guinea
5. *C. occidentalis* Ślipiński et al., 2023: Western Australia
6. *C. planicollis* (Blackburn, 1895): Esatsren Australia
7. *C. rasilis* (Olliff, 1888): Australia: Norfolk island

Key for *Cacodacnus* species

1(2) Mandibles with 2 teeth at the apex (one under, so only one is visible from the top)…..….....***C. occidentalis***

Notes. *C. occidentalis* is rather long; head, mandibles and elytra are almost of same width; antennae of males are rather short (shortest of all species) and are a bit longer than the center of body; mandibles are very short, almost two times shorter than the head; mandibles without 3rd tooth at the apex (due to the shape and size of the mandibles, the third apical tooth is placed closer to the base that makes the unique form of mandibles among all *Cacodacnus*). Pronotum spines are thin and curved. Pronotum with 2 big square glabrous callosities different from other species. Head with two slightly glabrous punctured tubercles between the eyes. Combination of these characters make this species well distinguished among other species.

Notes from Ślipiński *et al*. (2023). "Cacodacnus occidentalis can be distinguished from the widespread Australian species, C. planicollis, by the shorter male mandible without a dorsal subapical tooth on its inner margin. It can be distinguished from members of the C. hebridanus complex by its longer pronotal lateral projections that point backwards."

2(1) Mandibles with 3 teeth at the apex (2 seen from the upperside, 3rd placed underside and can bee seen only from ventral side).

3(6) Mandibles with additional tooth at the center of mandibles; major forms mandibles are slightly widened at the center, sometimes the tooth is barely visible, but mandibles are visibly widened. Pronotum shape is less rectangular with visible thin curved spines.

4(5) In forms with elongated mandibles, 3rd antennal segment is clearly longer than the pronotum width, mandibles thin and round, dense punctuated.

In forms with short mandibles, 3rd antennal segment is almost same length as pronotum.

Pronotum wider at the central spines, spines at the apex smaller than the central one……...……..…***C. rasilis***

Notes. Major forms of *C. rasilis* have longer and thinner mandibles than *C. planicollis*. Pronotum has different shape, widened at the central spines. Elytra more widened with strong costae, the most raised costae of all species of the genus.

Notes from Ślipiński et al. (2023). "Compared to other populations of this group the Norfolk Island specimens have relatively short elytra with very fine sparse punctures; the male frontoclypeus is relatively flat, sloping forward and has a short anteclypeus meeting the transverse labrum; the mandible has a strong lateral carina in the basal half and has the dorsal subapical tooth well separated from the apical ones; the gular area has a distinct transverse groove that is vermiculate, punctate and bears short setae; and the anterior prothoracic angle is short, pointed and somewhat posteriorly directed."

5(4) In forms with elongated mandibles, 3rd antennal segment is almost the same length as pronotum width, mandibles are widened with wide glabrous space on the inner side if mandibles.

In forms with short mandibles, 3rd antennal segment is visibly shorter than pronotum length.

Pronotum width is the same at central and apical spines; apical spines are of the same size as the central one. So overall pronotum shape is more parallel and square……...……***C. planicollis***

Notes. Major forms of *C. planicollis* have the widest mandibles of all species with wide glabrous impression; mandibles shorter than head. Pronotum apical spines big and curved like in

occidentalis, both in major and minor forms.

Notes from Ślipiński et al. (2023). *"Cacodacnus planicollis* can be separated from C. *occidentalis* by the male mandible always bearing a subapical tooth on the inner margin of the mandible. lt is also very similar to the *T. hebridanus* complex but can be recognised by its longer pronotal lateral projections that point backwards."

6(3) Mandibles don't have any signs of additional tooth at the center of mandibles; in major forms mandibles are long, thin and curved ; in minor forms straight in the center. Pronotum with flattened spines, sometimes a bit thin, but not or almost not curved.

7(8) Males pronotum with long hairs at the side of the base…….……...…***C. lameerei***

Notes. *C. lameerei* is a bigger species as C. hebridanus. But has very different pronotum shape from all species of the complex. Pronotum spines are thinner; pronotum at central spines is only a bit wider, sometimes wider at apical spines, that makes it's pronotum shape very different from other species of the complex. 3rd antennal segment is long at major and minor specimen. Mandibles length in minor specimen is a bit shorter than head, but not wide; in major forms mandibles long, but shorter than in C. hebridanus major forms.

Notes from Ślipiński et al. (2023). "The male frontoclypeus is relatively flat, sloping forward and has a short anteclypeus meeting the transverse labrum; the telodont mandible has a lateral carina in the basal half and a dorsal subapical tooth very close to the apical ones; the gular area lacks a transverse groove, is very coarsely vermiculate, punctate, and bears short setae; the anterior prothoracic angle is short and broad. The pronotum is very strongly sculptured in comparison with other populations, and the impressed lateral areas are more strongly coarsely punctate and setose."

8(7) Pronotum without long hairs, glabrous.

9(10) Males 3rd antennal segment long, visibly longer than the length of pronotum; major form mandibles longer than head. Mandibles of minor specimen shorter than head, but look elongated…….....***C. hebridanus***

Notes. *C. hebridanus* is a relatively big species (35 - 46, with

average size 41 mm for males and 38 mm for females). It has long mandibles in major forms, longer than *C. deplanchei* and *C. kozlovi*. Minor specimen have short mandibles that look elongated and have dense punctation. A bigger size, longer mandibles im major specimen, long 3rd antennal segment make this specie quite eazy to recognize. Also the pronotum shape is very different, but keys for pronotum are hard to make due to absence of easily recognizable characters. Comparison of specimen makes clear that pronotum shape differs well, and considering other characters like antennae, mandibles, head width makes them easy to recognize.

Notes from Ślipiński et al. (2023). "The male frontoclypeus is relatively flat, at one level, and the clypeus extends forward, meeting an apparently triangular labrum; the telodont mandible appears to lack a lateral carina but has the dorsal subapical tooth very close to the apex; the gular area lacks a distinct transverse groove, is coarsely vermiculate, punctate, and bears short setae; and the anterior prothoracic angle is short and broad."

10(9) Males 3rd antennal segment as long as pronotum length or shorter. Mandibles a bit longer than head or shorter.

12(13) Mandibles wide and flattened…….....…***C. deplanchei***

Notes. *C. deplanchei* is of big size too (size 24 - 49, with average size 35 mm for males and 41 mm for females), size between *C . kozlovi* and *C. hebridanus*; has wide flattened mandibles and much bigger distance between apical teeth than *C. kozlovi* and *C. hebridanus*, mandibles punctation is denser than in *C. kozlovi*; head relatively narrower comparing to pronotum and elytra than in *C. kozlovi*; pronotum with longer and more distinct spines than in *C. kozlovi* and *C. hebridanus*; apical spines on females pronotum longer and more flattened, central spines less wide; antennae shorter than body, shorter than in both other species; elytra are wider and darker, sometimes black with much more visible costae. Mandible size and shape with apical denticles at the same plane and bigger distance. Some minor specimen have additional teeth on the mandibles making *C. deplanchei* very different from other species of *hebridanus* complex.

Notes from Ślipiński et al. (2023). "The male frontoclypeus is concave and the clypeus does not extend forward, but meets the short labrum almost vertically; the strongly developed, telodont mandible has a strong lateral carina has the and dorsal subapical tooth distinctly separated from the apical one; the gular area has triangular impressions that are extremely coarse with uneven sculpture and bear short setae; the anterior prothoracic angle is short and broad."

13(12) Mandibles narrow, as long as head, glabrous, strongly punctation only on external sides; second apical denticle looks up; 3rd antennal segment as long as the pronotum length…..……***C. kozlovi***

Notes. *C. kozlovi* is a smaller species (size 27 - 45, with average 33 mm for males and 35 mm for females), quite glabrous, rather parallel species as head, pronotum and elytra width is similar; mandibles are quite long and rather narrow. These characters make it a well distinctive species.

Acknowledgements. We thank Dmitry Fominykh (Moscow, Russia) for the help with photos, measurements and material study, Andrey Titarenko (Moscow, Russia) for help with material for the study and Vladimir Gurko (Ukraine) for help with material for the study.

We are indebted to the collection managers of the institutions who lead us examine material for this study: Thierry Deuve, Antoine Mantilleri and Azadeth Taghavian (MNHN), and Wouter Dekoninck, curator of the entomological collections (Scientific Heritage Service, RBINS).

We express our sincere thanks to Derek Smith and Natalie Tees (AM) for the pictures of the syntype of *Cacodacnus rasilis*, to Jerôme Constant (O.D. Taxonomy and Phylogeny - Entomology, RBINS) for the pictures of the type of *Cacodacnus deplanchei* and to Laurent T'Joen (Belgium) for the pictures of *Cacodacnus deplanchei*.

We are grateful to the following citizen scientists for providing specimens and informations for this study: Norbert Delahaye, Jiri Dvoracek, Anton Kozlov, Claude Ripaille and Laurent T'Joen.

Finally, we thank to Jiri Pirkl (Czech Republic) who manages the website "www.prioninae.eu" devoted to the types of Prioninae of the world, providing important and evident help for species identification to the researchers in this subfamily of Cerambycidae. This leads us to be able to examine types of *Cacodacnus hebridanus* preserved in MNHN.

REFERENCES

Aurivillius C. 1925. Neue oder wenig bekannte Coleoptera Longicornia. 21. - Arkiv för Zoologi, Uppsala. 18A (9): 503-524.

Evenhuis N.L. & Ramsdale A.S. 2006. Checklist of the Coleoptera of Fiji. - Bishop Museum Technical Report. 38 (5): 1-59.

Fairmaire L.M.H. 1881. Essai sur les Coléoptères des îles Viti (Fidgi) Suite. - Annales de la Société Entomologique de France. (6) 1: 461-492.

Jin M., de Keyzer R., Ashman L.G., Zwick A. & Ślipinski A. 2023. Phylogeny and tribal classification of Australian Prioninae (Coleoptera: Cerambycidae). - Annales Zoologici, Warszawa. 73 (3): 499-512.

Lameere A.A.L. 1904. Révision des Prionides. Neuvième mémoire. - Callipogonines. Annales de la Société entomologie de Belgique. 48 (1): 7-78.

Lameere A.A.L. 1913. Cerambycidae: Prioninae. Coleopterum Catalogus (pars 52). 22: 1-108. W. Junk et S. Schenkling, Berlin.

Lameere A.A.L. 1919. Genera Insectorum. Coleoptera Longicornia, Fam. Cerambycidae, Subfam. Prioninae. P. Wytsman ed., Bruxelles, Belgium. (172): 1-189, pls. 1-8.

McKeown K.C. 1947. Catalogue of the Cerambycidae (Coleoptera) of Australia. - Memoirs of the Australian Museum, Sidney. 10: 1-190.

Olliff A.S. 1888. Report on a small zoological collection from Norfolk Island. IV. Insecta. - The Proceedings of the Linnean Society of New South Wales. 2 (2) 4 [1887]: 1001-1014.

Olliff A.S. 1890. Additions to the insect-fauna of Lord Howe Island, and descriptions of two new Australian Coleoptera. - Records of the Australian Museum. 1: 72-76.

Prioninae of the world. - URL: https://www.prioninae.eu/.

Ślipinski A., de Keyzer R. & Jin M. 2023. Australian Longhorn Beetles (Coleoptera: Cerambycidae) Volume 3. Subfamily Prioninae of the Australo-Pacific Region. ABRS, Canberra and Csiro publishing, Melbourne: i-xx + 1-512, 160 figs.

Species 2000 & ITIS Catalogue of Life, 22nd March 2017. - URL: www.catalogueoflife.org/col.

Tavakilian G. (Author) & Chevillotte H. (Software) [2022]. - Titan: base de données internationales sur les Cerabycidae ou Longicornes. Version 3.0 [XI.2022]. [http://titan.gbif.fr/index.html]. (Accession Date: 6 February 2025).

Thomson J. 1860-1861. Essai d'une classification de la famille des cérambycides et matériaux pour servir à une monographie de cette famille. Paris. 404 pp.

Thomson J. 1867a. In: Fauvel C.A. Catalogue des Coléoptères de la Nouvelle Calédonie et dépendances avec descriptions, notes et synonymies nouvelles. - Bulletin de la Société Linnéenne de Normandie. (2) 1: 172-290.

Thomson J. 1867b. IV. Révision du groupe des Mallodonites (insectes Coléoptères, Prionites, Cérambycides). - Physis, Recueil d'Histoire Naturelle. 1 (2): 85-106.

Received: 12.01.2025
Accepted: 10.03.2025

О ЖУРНАЛЕ

Гуманитарное пространство (Гуманитарное пространство. Международный альманах = Humanity space. International almanac) издается с 2012 года. Публикуются статьи, являющиеся результатом научных исследований. К печати принимаются оригинальные исследования, содержащие новые, ранее не публиковавшиеся результаты, обзоры, аналитические и концептуальные разработки по конкретным проблемам гуманитарных и естественных наук.

Издание зарегистрировано в Международном Центре ISSN в Париже (идентификационный номер печатной версии: ISSN 2226-0773).

Выходит 4 номера в год, а так же дополнения в виде приложения к журналу.

Альманах представлен во многих базах данных и каталогах: Zoological Record (Web of Science), ZooBank, EBSCO, ERIH PLUS, Index Copernicus International, Genamics JournalSeek, Google Scholar, Интеллектуальная система тематического исследования наукометрических данных (ИСТИНА), Российский индекс научного цитирования (РИНЦ), КиберЛенинка (Cyberleninka) и др.

ABOUT THE JOURNAL

Humanity space (Гуманитарное пространство. Международный альманах = Humanity space. International almanac) has been published since 2012. Articles that are the result of scientific research are published. Texts could be original researches, containing new, previously unpublished results, surveys, analytical and conceptual manuscripts on specific issues of the humanities and natural sciences.

Publication is registered in the ISSN International Centre in Paris (identification number printed version: ISSN 2226-0773).

There are 4 issues per year, as well as supplements in the form of an appendix to the journal.

Almanac is presented in many databases and directories: Zoological Record (Web of Science), ZooBank, EBSCO, ERIH PLUS, Index Copernicus International, Genamics JournalSeek, Google Scholar, Intellectual System of the Thematic Research of Scientific Metric Data (ISTINA), Russian Science Citation Index (RSCI), Cyberleninka etc.

Содержание // Contents